



ePetro™

Online Learning for Petroleum Professionals

The ePetro Petroleum Industry Overview Library

In this online learning series, we incorporate information from across the value chain, including geosciences, reservoirs, midstream operations, and process manufacturing. The library of web-based modules is available online, anytime and anywhere, and is designed to provide an understanding of the oil and gas industry.

ePetro™ is ideal for both technical and business-oriented professionals who are either new to the petroleum industry or staff who need to be able to understand the various aspects of oil and gas operations and speak the language of the oilfield. The series includes:

- Modern Oil & Gas Industry
- E & P Asset Life Cycle
- Reservoir Fluids
- Petroleum Geology
- Petroleum Reservoirs
- Exploration Rights and Surface/Subsurface Technologies
- Drilling Operations and Systems
- Well Completion and Stimulation
- Production Technology: Flowing Wells and Artificial Lift
- Hydrocarbon Recovery
- Surface Processing of Produced Fluids
- Midstream Industry Overview
- Pipelines and Storage Systems
- Gas Processing Overview
- Introduction to Refining
- Introduction to Petrochemicals

Designed specifically for the global Oil and Gas Industry

Pre-tests and Post-tests

Customization for Site Specifics

Gap Identification and Remediation

Integrates with existing LMS/ERP systems - AICC/SCORM Compliant

Contact us at, solutions@petroskills.com

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Modern Oil and Gas Industry

Oil and Gas Companies

IOCs and NOCs

Once a potentially attractive area to drill has been identified, the oil company must obtain the rights to explore and drill there. Subsurface rights can be privately held in the U.S., so subsurface mineral rights are negotiated with the government or private owner. In other parts of the world, however, the government owns all subsurface rights. In those cases, the company must negotiate directly with the host country government or one of its agents, typically a National Oil Company (NOC), National and International oil companies perform different roles:

International Oil Companies (IOCs)

An IOC is a publicly-owned energy company with shares held by stockholders - they risk capital to provide the greatest returns to stockholders. They have the expertise to extract the resources, compete globally, and often partner with National Oil Companies in host countries.

National oil companies (NOCs)

In the 1970's, IOCs held most of the world's petroleum reserves. Many of the IOCs were made up of multinational companies formed after the breakup of the Standard Oil Company monopoly, plus European IOCs. The largest of these were referred to as the "Seven Sisters"; they dominated the industry, often sharing multiple joint ventures. IOCs bring capital, expertise, and experience to the host country to develop their fields.

There are many international oil companies. A few examples include: BP, Chevron, Royal Dutch Shell, ExxonMobil, PetroChina, Petrobras, Repsol, Total S.A., EcoPetrol, OMV, Sasol, Sinopec, MOL Group, ConocoPhillips and Lukoil.

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Petroleum Industry - Past to Present

Oil and Gas Companies

Oilfield service companies include: Halliburton, Baker Hughes, Schlumberger and Weatherford. They vary in size, but all compete on price and quality for the products and services they provide. Watch the video to learn more about oilfield service companies.

Oilfield Service Companies

Products
Resources
Expertise

Oilfield service companies provide:

- Expertise
- Capital

Answer

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ePetro™ Industry Overview Course Library		
PS-EPT-INO-101	Modern Oil and Gas Industry	2 hr
Historical, geographical, and modern context of the petroleum industry; its organization; the petroleum value chain; and economic drivers.		
PS-EPT-INO-102	Introduction to the E&P Asset Life Cycle	1 hr
Asset life cycle economics; and all the phases of the asset life cycle, including: exploration, appraisal, development and production; and mature production and enhanced oil recovery.		
PS-EPT-INO-103	Reservoir Fluids	1 hr
Reservoir fluids, physical and chemical properties, and the impact on these properties at reservoir and surface conditions.		
PS-EPT-INO-104	Petroleum Geology	4 hr
Earth structure and plate tectonics; types of rocks, the rock cycle, clastic, biogenic, and chemical source sedimentary rocks; and historical geology, including superposition, index fossils, depositional environments, and global vs. regional stratigraphy.		
PS-EPT-INO-105	Petroleum Reservoirs	5 hr
Basins and plays, unconventional resources, petroleum systems; reservoir rock properties: porosity and permeability, grain size, distribution, and sorting; and fluid distribution and flow characteristics. You will also learn about structural and stratigraphic traps, reservoir mapping, reservoir phase behavior and fluid properties, reservoir classification, and phase diagrams.		
PS-EPT-INO-106	Exploration Rights and Surface/Subsurface Technologies	3 hr
Basins, plays, and risk analysis, mineral ownership and contracts; surface exploration technologies, such as gravity, magnetic, and geochemical surveys, and seismic imaging and interpretation; and subsurface technologies such as mud logging, appraisal wells, coring, well logging, and drill stem testing.		
PS-EPT-INO-107	Drilling Operations and Systems	3 hr
Well function, drilling history, onshore and offshore drilling, drilling programs, drilling rig components, and drilling systems; including drilling, rotating, fluid, and blowout prevention systems.		
PS-EPT-INO-108	Well Completion and Stimulation	2 hr
Casing and cementing, wellhead installation, types of well completions, formation damage and well perforation, sand control problems and strategies, and well stimulation.		
PS-EPT-INO-109	Production Technology: Flowing Wells and Artificial Lift	1 hr
Production roles, artificial lift, including beam pumps, gas lift, and submersible pumps; production logging, and workover operations.		
PS-EPT-INO-110	Reservoir Development and Hydrocarbon Recovery Mechanisms	1 hr
Primary recovery drives such as dissolved gas (solution gas) drive, water drive, gas cap expansion drive, and combination drives. You will also learn about enhanced oil recovery, including secondary and tertiary recoveries, such as water flood, miscible flood, steam cycle, and steam drive, along with expected recovery efficiencies.		
PS-EPT-INO-111	Surface Processing of Produced Fluids	1 hr
Integrated production system, fluid separation, emulsion breaking, crude products, gas separation and natural gas processing, NGL usage, and natural gas conversion to LNG and GTL.		
PS-EPT-INO-112	Overview of the Midstream Industry Segment	3 hr
The Petroleum Value Chain, the midstream segment, conventional and unconventional reservoirs, the crude oil and natural gas value chains and value chain investment trends; natural gas terminology, global energy demand and trade, gas production and contracts; and gas processing, including end use products, contaminants and sales gas specifications, gas conditioning, dehydration, hydrocarbon dewpoint control, NGL extraction and stability, and NGL product treating.		
PS-EPT-INO-113	Pipelines and Storage Systems	2 hr
Hydrocarbon transportation systems, advantages of pipelines, pipeline projects, pipeline construction and types of pipelines; pipeline system design and components; pipeline problems and protection; and pigging. In addition, you will learn about hydrocarbon storage systems for liquids and gases, including appropriate types of tank designs and use of depleted reservoirs and salt caverns.		
PS-EPT-INO-114	Gas Processing Overview	3 hr
Saleable products recoverable from raw, produced gas; gas composition and contaminants; sales gas specifications; gas sweetening and dehydration; hydrocarbon liquid products and extraction processes, Nitrogen removal and helium recovery; NGL fractionation/stabilization; NGL product treating; and sulfur recovery and disposal.		
PS-EPT-INO-115	Fundamentals of Refining	2 hr
The refining industry as part of the downstream petroleum value chain including characteristics of crude oil and the refining products made from it, refining economics, a typical refinery configuration with its process streams and units.		