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# Petroleum Technology Basics for Non-Engineers Training Course

18 – 22 April 2027
Cairo

# Petroleum Technology Basics for Non-Engineers Training Course

**Ref:** 2643_100556 **Date:** 18 – 22 April 2027 **Location:** Cairo **Fees:** 4000 GBP

Petroleum Technology Basics for Non-Engineers is a 1-week training course for new joiners in commercial, finance, legal, human resources and support roles, who leave with a value chain process map tracing oil and gas through every facility. Operators expect support staff to follow site briefings without an engineer translating. Jupiter Prime Training runs this course for newcomers who need petroleum technology explained in plain words.

## Why Petroleum Technology Basics Matters Now

Three forces bring petroleum technology to people who never studied engineering. Digital oilfield work puts well and plant data in front of contract, budget and planning staff daily. Workforce turnover brings newcomers from other sectors, such as banking and retail, who must quickly grasp rigs, separators and columns. Lower-carbon targets add flaring reduction and gas reinjection to everyday talk. A colleague who can picture the hardware asks sharper questions about delays and shutdowns; one who cannot slows decisions.

## Who Gains Most from Petroleum Technology Basics

- Staff who prepare or check contracts for drilling, well services and plant maintenance
- Budget and cost staff who follow spending on wells, pipelines and processing units
- People who recruit, onboard or develop field crews
- Communication and stakeholder staff who explain operations, incidents and shutdowns to outside audiences
- Planning and administrative staff who schedule logistics, permits and supplies for field sites

Support departments sending several new joiners together gain a shared technical vocabulary.

## Petroleum Technology Basics Capabilities

Participants turn rocks, rigs, pumps, vessels and columns into a picture they can sketch, explain and question.

- Describe how source rock, migration, trap and seal create an accumulation — in exploration updates
- Explain the main parts of a drilling rig and the stages of building a well — in contract talks
- Identify how oil, gas and water reach the surface and are separated — in production reports
- Trace crude through distillation, conversion and blending into saleable fuels — with downstream colleagues
- Recognise the hazards and safeguards found at each facility — on site visits
- Build a value chain process map linking each facility to the products it delivers — for briefing managers

## Key Petroleum Technology Basics Terms

- Trap — a rock arrangement, such as a fold or fault, that stops oil and gas moving upward so they collect.
- Porosity — the share of a rock's volume made up of pore spaces that can hold oil, gas or water.
- Casing — steel pipe cemented into a drilled hole to keep it open and isolate rock layers.
- Christmas tree — the assembly of valves on top of a producing well that controls flow from it.
- Separator — a pressure vessel that splits the produced stream into oil, gas and water.
- Fractional distillation — heating crude in a column so that parts with different boiling ranges separate into cuts.

## Petroleum Technology Basics Day by Day

### Day 1: From Rock to Prospect

- Origin of Oil and Gas in Source Rocks — Why Some Basins Hold Hydrocarbons
- Reservoir Rock, Porosity and Permeability — How Fluids Are Stored and Flow
- Traps and Seals — Where Accumulations Form and Stay
- Seismic Surveys in Plain Terms — How Explorers Image the Subsurface
- Prospect Maturity and Exploration Wells — Deciding Where to Drill First

### Day 2: Building a Well

- Drilling Rig Components and Crew Roles — Reading a Rig Site Layout
- Bits, Drill String and Drilling Fluid — What Drives Drilling Speed
- Casing and Cementing Sequence — Protecting the Well and Groundwater
- Onshore, Shallow Water and Deepwater Rigs — Matching Rig Type to Location
- Well Logging and Testing — Confirming What the Well Has Found

### Day 3: Bringing Fluids to Surface

- Completions and the Christmas Tree — Controlling Flow from Each Well
- Natural Flow and Artificial Lift Methods — Keeping Wells Producing as Pressure Falls
- Gathering Lines and Separators — Splitting Oil, Gas and Water
- Produced Water Handling and Injection — Limiting Discharge and Supporting Pressure
- Production Rates and Decline Curves — Reading Daily Output Reports

### Day 4: Treating, Moving and Refining

- Gas Processing, Dehydration and Liquids Recovery — Making Gas Fit for Sale
- Pipelines, Pump Stations and Storage Tanks — Moving Crude and Gas Safely
- Crude Distillation Column and Product Cuts — Splitting Crude by Boiling Range
- Cracking, Reforming and Treating Units — Turning Heavy Cuts into Fuels
- Blending, Product Quality and Terminals — Delivering Gasoline, Diesel and Jet Fuel

## Day 5: Practising the Value Chain Map

- Process Safety Barriers Across Facilities — Recognising Hazards on Site Visits
- Flaring, Venting and Emissions Reduction — Where Lower-Carbon Changes Apply
- Field Walkthrough Case of Wellhead to Terminal — Linking Geology, Wells and Plants
- Technical Vocabulary Briefing Rehearsal — Explaining Hardware to Non-Technical Colleagues
- Value Chain Process Map Completion — Sketching Every Facility and Product Flow

## Applying Petroleum Technology Basics After the Course

- Lead a short briefing for the department that walks colleagues from trap and well through separator, pipeline and distillation column
- Annotate one current contract, budget line or schedule with the rig, well or plant equipment it concerns and the questions to ask the engineers

## Petroleum Technology Basics Questions FAQ

### What does petroleum technology basics cover and why does it matter now?

Petroleum technology basics covers how oil and gas form, how wells are drilled and produced, and how refineries make fuels. It matters because support staff now see technical data daily.

### Which roles gain most from petroleum technology basics?

Petroleum technology basics suits contract, cost, people, communication and planning staff who are new to the industry. It suits anyone whose work touches wells or plants without an engineering background.

### How is petroleum technology basics different from a petroleum engineering course?

Petroleum technology basics explains hardware in plain words without calculations. Practitioner engineering courses teach design equations, and business value chain courses follow commercial flows rather than how rigs and columns work.

### What do you bring back from petroleum technology basics?

You bring back a sketch of every facility from rock to terminal and the vocabulary to explain it. You can follow technical meetings and question schedules with confidence.

## Petroleum Technology Basics: The Way Forward

The value chain process map gives each participant one page showing traps, wells, separators, pipelines and refinery units in sequence. Its first use is in reading the next production report or contract scope with the right picture in mind. Managers and new colleagues share it; revisit it after the first site visit.