Training - Petroleum Engineering

EPETROL-EN-P | Face-to-face only | 100 days

This course provides in-depth technical knowledge of Oil & Gas production in order to hold rapidly, and very effectively, the position of field engineer, design engineer, or project engineer

IFP Training Certificate

Graduate Certificate

Level

Knowledge

Public

Engineers (particularly recently graduated engineers or engineers in conversion) looking to acquire in-depth knowledge and best practices of Oil & Gas production

Objectives

Attendees will be able to implement the following skills:

- Grasp fundamentals of reservoir engineering and drilling
- Explain well completion and servicing, well performance and artificial lift
- Understand fundamental concepts underlying Oil & Gas processing
- Understand in detail operating conditions and basic design of oil, water and gas treatment
- Describe technology of static equipment and rotating machinery used in production facilities
- Explain offshore development techniques and flow assurance issues
- Identify main risks related to Oil & Gas production operations and review safety engineering best practices
- Contribute to the dynamics of field development projects studies
- Explain main contracts in E&P and assess project profitability

Pedagogical & technical resources

- Highly interactive training with industry specialist lecturers
- Multiple teamwork sessions and industrial case studies
- Numerous process simulation exercises using PRO/II™ software
- Final 10-day group project on a real field development case study, result of which are presented to a jury

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

rc.contact@ifptraining.com

© IFPTraining

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

INTRODUCTION TO PETROLEUM GEOSCIENCES — 5 days

Elements & processes of petroleum systems. Exploration tools (seismic & well data). Prospect evaluation.

INTRODUCTION TO RESERVOIR CHARACTERIZATION — 5 days

Reservoir architecture. Geological characterization. Reservoir heterogeneities.

INTRODUCTION TO RESERVOIR ENGINEERING — 5 days

Reservoir engineering workflow. Petrophysics/rock properties. PVT. Well testing. Drive mechanisms.
Case study: field development plan.

DRILLING FUNDAMENTALS — 5 days

Drilling operations. Architecture of the well & completion.

WELL PRODUCTIVITY & RESERVOIR - WELLBORE INTERFACE — 5 days

Well productivity. Reservoir wellbore interface implementation.

ARTIFICIAL LIFT & WELL INTERVENTION FUNDAMENTALS — 5 days

Artificial lift: gas lift, ESP. Types and means of intervention on producing wells. General procedure of a workover.
Case study.

WELL CONTROL — 5 days

Introduction to well control methods. Equipment. Wireline, coiled tubing, snubbing.

THERMODYNAMICS APPLIED TO WELL EFFLUENT PROCESSING — 5 days

Well effluent. Gas compression and expansion. Liquid-vapor equilibrium of pure components and mixtures.
Mixture separation.

OIL & WATER TREATMENT — 5 days

Crude oil treatment: stabilization, dehydration, sweetening. Reject and injection water treatment.

GAS PROCESSING & CONDITIONING — 5 days

Gas processing: dehydration, sweetening, NGL recovery. Fundamentals of Liquefied Natural Gas (LNG) chain.

STATIC EQUIPMENT & SCHEMATIZATION — 5 days

Piping & valves. Storage equipment. Thermal equipment. Flow assurance. Schematization.

ELECTRICITY & INSTRUMENTATION — 5 days

Electrical power generation and distribution network. Instrumentation and process control. Safety Instrumented Systems.

METERING - MATERIAL BALANCE - ALLOCATION — 5 days

Data treatment. Transactional metering of liquids and gases. Multi-phase metering.
Liquid & gas material balances. Production reporting.

ROTATING MACHINERY — 5 days

© IFPTraining

Centrifugal and positive displacement pumps. Centrifugal and reciprocating compressors. Turbo-expanders. Gas turbines.

OFFSHORE FIELD DEVELOPMENT - FLOW ASSURANCE — 5 days

Offshore development architecture. Technology & deep offshore specificities. Pipelines. Flow assurance issues.

SAFETY & ENVIRONMENT IN SURFACE PROCESSING FACILITIES — 5 days

Hazards and risks in production operations. Safety in production operations and during construction or maintenance works. HSE management.

SAFETY ENGINEERING — 5 days

HAZID application, HAZOP exercise, plant layout exercise. QRA and consequence analysis methodology. SIS and relief systems design.

PETROLEUM ECONOMICS & PROJECT MANAGEMENT — 5 days

Fundamentals of contracts. Project profitability evaluation. Risk analysis of Exploration & Production projects. Project cost estimation and cost control.

FIELD DEVELOPMENT PROJECT - JURY — 10 days

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

© IFPTraining