

Petroleum Engineering for Other Disciplines

This 5-day course is intended for professionals with a non-petroleum engineering degree, who currently work in, or wish to work in, the Petroleum Industry.

The course will address the story of oil from its origin to the end user. The objective is to provide an overview of the fundamental operations in exploration, drilling, production, processing, transportation, and refining of oil and gas.

This is one of our longest running courses and has been delivered as an open CPD course since 2004. The course contents have been improved and revised in response to participant feedback and changes within the industry. This course could be tailored to the specific needs of the participants, as required. Please contact us if there are specific topics you would like us to include or expand on.

Target audience

Professionals who wish to enhance their existing skills set to support their employment and career progression in the Oil and Gas Industry.

Recent participants include professionals from:

- Advanced Drilling Fluids
- Asia Connecting Center
- ATP Oil & Gas Corporation (ATP)
- Baker Hughes
- Caerketton Ltd
- Crondall Energy Consultants
- Heriot-Watt University
- James Walker
- Kosmos Energy Ghana HC
- Mærsk Oil and Gas
- Petromar Angola
- Rothschild
- Senergy
- Talisman-Energy
- TNK-BP
- Weatherford
- Hydrafact
- ADTI
- OMV Petrom S.A.

...and many more who wished to improve their employability through developing their understanding of Petroleum Engineering

Course requirement

A degree in science or engineering is desirable.

Content

Introduction

- A brief history
- Origin of petroleum
- Plate tectonics
- Units in petroleum engineering
- Overview of the industry

Geology

- Petroleum geology and geophysics
- Fluid migration
- Reservoir formation
- 2, 3 and 4 D seismic

Drilling

- Drilling operations (onshore, offshore)
- Rig components
- Top drive
- Formation pressure
- Leak off test
- Drilling problems
- Coring
- Casing design
- Cementing
- Cement log (CBL/VDL)
- Directional drilling
- LWD
- MWD

Production

- Field development (onshore, offshore)
- Logging (open/cased hole)
- PLT
- Production technology
- Inflow Performance
- Vertical lift

- Flow through chokes
- Nodal analysis
- Well completion
- Downhole and surface components
- Perforation
- Intelligent wells
- Wireline operations
- Well intervention
- Workover
- Coiled tubing
- Abandonment
- Well Integrity Management
- Artificial lift
- Formation damage
- Well test
- Well stimulation
- Sand control

Reservoir Engineering

- Reserve estimation
- PVT and phase behaviour
- Equation of State
- PVT tests and reports
- Properties of reservoir fluids (density, viscosity, IFT)
- Reservoir rock properties
- Production mechanisms (primary, secondary, EOR/IOR)
- Material balance
- Reservoir simulation

Processing

- Oil production
- Processing and treatment
- Gas production and processing
- as/oil transportation

Flow assurance

- Hydrates
- Scale
- Wax
- Asphaltene
- Corrosion
- Slugging
- Pigging
- Emulsion
- Foaming

Additional topics

- Heavy oil
- Unconventional reservoirs
- CO2 capture transport and storage
- Digital fields
- Refining
- End products and their usage
- Environment

Instructor

This course is presented by Prof. Bahman Tohidi.

Cost

£1,900

Booking

If you are interested in attending this course please email the CPD Manager at info@hydrafact.com

Delegate feedback

Course content and applicability

"Videos and pictures were very useful to understand, the course was flexible to cover the discussion points we were interested in"

"The practical application of the course materials to field was well done"

"Broad range of topics covered, drilling (Day 2) extensively useful & Days 4 & 5 (details on processing facilities) very thorough"

"Excellent course. Covered in good detail most of the Petroleum topics that are important for me. In general, I thought the technical balance was just right, in that it challenged me and improved my knowledge"

"The course gave information on topics of exactly expected level. Not too much detailed and at the same time it is covering all major issues"

"The course was valuable to me in that it had the complete cycle of hydrocarbon production following on from our previous experience to drill a well. Very valuable to know types of completions and methods to improve the life of a well."

"Very interesting and well presented. The course will definitely improve my understanding of the technical aspects which I discuss with various department specialists (wells, subsurface and projects in particular)"

Instructor

"Very informative; now I have much better understanding about Petroleum Engineering. Prof. Tohidi clearly has very extensive knowledge about the subject"

"Very high level of the teacher knowledge, a lot of information on each subject, every question answered to maximum extent"

"Diction of the instructor was excellent for understanding"

"Very knowledgeable instructor, answered all questions and was very approachable"

"I liked the enthusiasm of the instructor regarding the topics being discussed and the ability of the instructor to recognise areas we were already competent in and replace them with subjects that were new to us"

"Instructor was excellent, continually evaluating content and tailoring instruction specifically for class"