



## Introduction to Oil and Gas Production Facilities - PF-2

### COURSE

#### About the Course

PF-2 is a versatile overview of oil and gas production facilities. The primary focus is on the different production facility types, processes utilized, and the primary equipment involved. The scope of the discussion ranges from an overview of the oil and gas industry, hydrocarbon phase behavior characteristics, and different reservoir types, to product specifications and the processes used to meet these. Other facilities considerations are addressed, such as process safety and downstream processing that may impact the production facility selection and operation.

*"I really liked how the instructor broke down clearly how each production facility equipment worked."* - Supply Chain Associate

*"The instructor was super! Enjoyed pipeline, pumps, and mechanical discussions in general."* - Participant, United States

#### Target Audience

Those interested in an overview of production facilities, including subsurface professionals, line managers, sales or business development staff, environmental personnel, operations staff, and those new to the industry, such as entry-level (1-2 year) engineers.

#### You Will Learn

- How the reservoir type, drive mechanism, fluid properties, location, and product specifications influence the selection and design of the production facilities
- How to do quick 'back of the envelope' calculations to better understand equipment sizing and capacity
- Parameters that affect the design and specification of oil stabilization and dehydration equipment
- Awareness of the parameters that determine flowline/gathering system capacity
- The purpose of separators in a production facility and familiarity with the typical configurations
- Typical design parameters, operating envelopes, common operating problems of oil and gas production equipment, and the effect of changing feed conditions over the life of a field
- To describe oil dehydration/desalting process options and equipment
- Produced water treating options and the dependence on surface vs. subsurface, offshore vs. onshore disposal
- Compressor performance characteristics and how they affect production rates and facility throughput
- Gas dehydration process options, with a particular emphasis on glycol dehydration

- The principles of asset integrity and inherently safe design given the rate, composition, temperature, and pressure of the production stream
- About midstream facilities required downstream of the primary production facility to deliver saleable products to the market, and how these facilities are affected by production rates, composition, and production facility performance

## Course Content

- Overview of the oil and gas industry
- Overview of qualitative phase behavior and reservoirs
- Important hydrocarbon properties and terminology
- Typical sales/disposal specifications
- Flowlines, piping and gathering systems
- Production separation
- Oil processing
- Water injection systems (including pumps)
- Gas handling - compression
- Gas handling - dehydration
- Measurement and storage
- Other facilities considerations - utilities, process safety
- Midstream facilities - gas processing
- Midstream facilities - pipelines
- Midstream facilities - LNG

## Product Details

Categories: [Midstream](#)

Disciplines: [Process Facilities](#)

Levels: [Basic](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [PetroSkills Specialist](#) [William Dokianos](#) [James Langer](#)

## In-Classroom Format

23 Sep '2425 Sep '24- | Course | In-Classroom (in Houston)\$3,475.00

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