



## **Oil and Gas Processing Facilities for Operations and Maintenance - OT-1**

### **COURSE**

#### **About the Course**

The public course content is governed by the common production / processing facilities in the regions where the course is being held. There is gas / LNG content focus, gas / expander plant, or oil / water / gas focused courses. Note that the North Sea content has produced water treating included as well. The course is customizable to meet client needs at no additional cost.

#### **Marcellus / Bakken Gas Processing Modules**

- Overview of gas processing
- Industry terminology
- Process drawings
- Units of measurement
- Hydrocarbons physical properties
- Phase behavior fundamentals
- Water / hydrocarbon behavior
- Basic principles of fluid flow
- Amine gas sweetening
- Mole sieve dehydration
- Mechanical Refrigeration
- GSP (T/E) Process Operations
- NGL stabilization and fractionation
- Process troubleshooting

#### **Permian / Eagle Ford / North Sea Oil and Gas Production and Processing Modules**

- Overview of oil and gas processing
- Industry terminology
- Process drawings
- Units of measurement
- Hydrocarbons physical properties
- Phase behavior fundamentals
- Basic principles of fluid flow
- Gas lift systems
- Production separators
- Crude oil dehydration
- Crude oil desalting
- Crude oil, condensate, and NGL stabiliation
- Crude oil storage and vapor recovery systems

- Crude oil pipeline systems
- Produced water treating
- Process troubleshooting

## Australia Gas Processing Modules

- Overview of gas processing
- Industry terminology
- Process drawings
- Units of measurement
- Hydrocarbons physical properties
- Phase behavior fundamentals
- Water / hydrocarbon behavior
- Basic principles of fluid flow
- Amine gas sweetening (not in Brisbane)
- Mole sieve dehydration
- Mechanical refrigeration
- Cascade refrigeration
- Mixed refrigerants
- NGL stabilization and fractionation
- LNG facilities
- Process troubleshooting

*"I found this course very informative. I would definitely recommend this course to all. The instructor is a great teacher!"* - Participant, United States

## Target Audience

Facility operators who require a working knowledge of the various processes used in production fluid conditioning and processing, including the common operational difficulties that may arise and operational tactics used to resolve them. Also suitable for maintenance technicians, supervisors, and managers, as well as other non-engineering personnel who would benefit in an understanding of gas processing techniques that can be applied to their daily work activities.

## You Will Learn

- About the effects of produced fluid compositions (oil/gas/water) on facility operation
- About separation, conditioning, and processing operations to meet product specifications on oil, gas, and produced water streams for disposal/re-use
- How to operate facilities to minimize operating costs

- How to apply course material to troubleshooting equipment and unit operations

## Course Content

- Basic chemistry and physical principles related to hydrocarbons
- Quick overview of gas processing
- Phase behavior fundamentals
- Mass transfer operations
- Amine gas sweetening
- Water-hydrocarbon behavior, including hydrate formation
- TEG gas dehydration
- Solid bed adsorbers
- Mechanical refrigeration
- Gas expansion NGL recovery (turbo expanders and Joule-Thompson effect)
- NGL stabilization and fractionation
- Claus sulfur recovery

## Product Details

Categories: [Upstream](#)

Disciplines: [Operations & Maintenance](#) [Process Facilities](#)

Levels: [Basic](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [Stuart Watson](#) [Frank Ashford](#) [William \(Bill\) Finch](#) [Kindra Snow-McGregor](#)