



Gas/Liquid Separation Fundamentals for Facilities Engineers - G4 Short Course - Instructor-led + eLearning

COURSE

About the Course

This short course is from the industry-standard Gas Conditioning and Process course (G-4), known globally as the Campbell Gas Course. Each session will follow the format below:

Days 1-2:

- 3 hours prerequisite e-Learning modules (participants may test out)
- 1.5 hours required e-Learning modules

Day 3:

- 4.5 hours virtual, instructor-led session, 9:00-13:30 CDT (GMT-5)

Day 4:

- 3 hours virtual, instructor-led session, 9:00-12:00 CDT (GMT-5)

[Click here to see the full G-4 Short Course listing](#)

Separators are a critical but often overlooked component in a processing facility. Applications range from bulk separation of fluids to gas scrubbing upstream of compressors and gas polishing upstream of dehydrators and amine systems. Poor separator performance can significantly impair the effectiveness and availability of downstream process equipment, which in turn reduces profitability.

This short course covers separation principles, applications, and sizing techniques.

We will cover the sizing criteria for 2-phase (gas - liquid) and 3-phase (gas - hydrocarbon liquids - water), separator configurations, components and internal devices. The virtual instructor-led lecture will cover detailed separator sizing and analysis methods that will allow facilities engineers to do detailed vendor bid package analysis in terms of the proposed separator size, as well as brownfield separator troubleshooting and debottlenecking.

The problem assignments will apply these methods to real world example problems, and a problem debrief and round table discussion will delve further into practical issues associated with separation equipment, causes of common operating problems, and possible solutions to consider.

This in-depth course is invaluable to facilities engineers that are struggling with operating issues in existing facilities, or for engineers that are currently working on greenfield projects that will be responsible for

separator sizing and selection.

Prerequisites, which participants can test out of, cover Basic Conversions, Gas and Liquid Physical Properties, Multicomponent Phase Behavior, the Effect of C6+ Characterization on Phase Behavior, and Vapor Liquid Equilibrium.

"This was a dense course that had a lot of information that I did not realize that went into sizing and optimizing separators. It was well done and the multiple sections and videos that split the topics up were well done." - Graduate Engineer, United States

"Excellent. I was initially skeptical about the remote/online learning format, but I found the course to be very effective. I got what I wanted from the course and I would like to do more." - Process Control Engineer, United States

"I found the course content was at the right level, and inclusion of real-world problems helped to understand the concepts and why they are important. The PetroSkills learning platform is easy to use and to navigate." - Process Safety Engineer, United States

Target Audience

Production and processing personnel involved with natural gas and associated liquids, to acquaint or reacquaint themselves with gas conditioning and processing unit operations.

This course is for facilities engineers, process engineers, senior operations personnel, field supervisors, and engineers who select, design, install, evaluate, or operate gas processing plants and related facilities.

These short courses are ideal for mid-career professionals that have experience in the industry and have been transferred to a new role or assignment.

They are also ideal for new engineers that need to get up to speed quickly on the primary principles of gas processing with a deep dive on the issues of the short course topics.

You Will Learn

- The different types of separators and their application
- Common configurations and internal devices for both vertical and horizontal separators
- Methods to estimate required conventional separator size
- Methods to select and size separator internals
- Approaches that can be used to troubleshoot exist separators or analyze vendor bids for conventional separators

Course Content

e-Learning content:

- Principles of Gas-Liquid Separation
- Two-Phase Separators
- Mist Extraction Devices
- Vertical and Horizontal Separators

Instructor-led sessions:

- Fundamentals of Gas / Liquid Separation Lecture
- Self-Directed Problem Assignment
- Problem Debrief and Experience Round Table

Product Details

Categories: [Midstream](#)

Disciplines: [Gas Processing](#)

Levels: [Foundation](#)

Product Type: [Course](#)

Formats Available: [Virtual](#)

Instructors: [Gerard Hageman](#) [Mahmood Moshfeghian](#) [Kindra Snow-McGregor](#)