



Gas Process and Equipment Design

Course Introduction:

This course provides an essential overview of the principles, techniques, and technologies involved in designing gas processing systems and equipment. Participants will learn about the various stages of gas processing, including purification, separation, and compression, as well as the design considerations for the associated equipment. This short course is crucial for professionals in the oil and gas industry seeking to enhance their design capabilities and operational efficiency.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the fundamental principles of gas processing and equipment design.
 - Identify and evaluate different gas processing techniques and technologies.
 - Design and optimize gas processing systems, including the selection and sizing of equipment.
 - Implement best practices for the safe and efficient operation of gas processing facilities.
 - Analyze and troubleshoot common issues in gas processing systems.
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Who Should Attend?

This course is intended for chemical engineers and process engineers involved in gas processing, operations and maintenance personnel, safety and compliance professionals in the oil and gas sector.

Course Outline:

Day 1: Introduction to Gas Processing

- Overview of Gas Processing and Its Importance
- Composition and Properties of Natural Gas
- Key Stages in Gas Processing
- Overview of Gas Treatment Methods

Day 2: Introduction to Gas Processing

- Gas Separation Methods
- Gas Purification Technologies
- Design Considerations for Separation Equipment

Day 3: Compression and Transportation

- Principles of Gas Compression
- Types of Compressors and Their Applications
- Pipeline Design and Transportation Considerations
- Safety and Environmental Considerations in Gas Transportation

Day 4: Equipment Design and Integration

- Design Principles for Gas Processing Equipment
- Equipment Sizing and Selection (e.g., Heat Exchangers, Reactors)
- Process Flow Diagrams and Mass/Heat Balances
- Integration of Processing Units for Optimal Performance

Day 5: Operational Best Practices and Troubleshooting

- Control Strategies for Gas Processing Systems
- Maintenance Practices for Gas Processing Equipment
- Common Challenges and Troubleshooting Techniques
- Future Trends in Gas Processing Technologies
- Final Q&A Session and Course Wrap-Up

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

