



CO2 Surface Facilities - PF-81

COURSE

About the Course

This course emphasizes the effect of carbon dioxide on the selection and operation of equipment (separators, compressors, and dehydrators), as well as sweetening process equipment. This program, first introduced in 1985, assists those working with carbon dioxide or high carbon dioxide content natural gas. This course is particularly applicable to those persons who operate and/or design enhanced oil recovery (EOR) facilities using CO₂ as a miscible agent. Physical and thermodynamic property data for carbon dioxide/natural gas mixtures are discussed. Calculations are performed to illustrate principles and techniques. An extra day will be added to this course if a plant tour is available (Midland public course sessions, or in-house sessions only).

Target Audience

Engineers and senior operating personnel involved with carbon dioxide/natural gas/CO₂ EOR systems.

You Will Learn

- What to expect over the life of a CO₂ EOR system
- Impact of CO₂ on the design and operation of oil production equipment
- Physical and thermodynamic properties of pure CO₂, and the impact of CO₂ in hydrocarbon mixtures
- Dehydration of high CO₂-content gases
- Best practices to deal with Dense Phase pipelines, metering, flaring etc.
- How to pump and compress CO₂
- Using purification processes: membranes, Ryan-Holmes, amines, hot carbonate, etc.

Course Content

- Overview of CO₂ injection and process facilities
- Heavy emphasis on CO₂ for enhanced oil recovery
- Physical and thermodynamic properties of CO₂ and high CO₂ mixtures
- Materials selection and design consideration in CO₂ systems
- Process vessel specification
- Pumps and compressors
- Fluid flow and special pipeline design considerations such as the control of ductile fractures
- Dehydration of CO₂ and CO₂-rich gases

- General overview of processes to treat/recover CO2

Product Details

Categories: [Midstream](#)
Disciplines: [Process Facilities](#)
Levels: [Specialized](#)
Product Type: [Course](#)
Formats Available: [In-Classroom](#) [Virtual](#)
Instructors: [Wes Wright](#) [Paul Carmody](#)

In-Classroom Format

6 Nov '24	8 Nov '24	-	Course	In-Classroom (in Houston)	\$3,655.00
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Virtual Format

13 May '24	23 May '24	-	Course	Virtual (Houston UTC)	\$3,175.00
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