Email: info@gatewayconsulting.com | Phone: +96522968641
https://gatewayconsulting.com

CARBON CAPTURE, UTILIZATION & STORAGE (CCUS) FOR ENGINEERS

Start Date:	11/01/2027	**End Date:**	15/01/2027
Categories:	Oil & Gas	**Venues:**	Barcelona
Formats:	In Person	**Instructors:**	

OVERVIEW

This technical course equips oil & gas engineers with comprehensive knowledge and tools to design, evaluate, and implement carbon capture, utilization, and storage (CCUS) technologies. Participants will explore engineering principles, project development stages, and risk management frameworks for successful CCUS deployment.

OBJECTIVES

By the end of this course, participants will be able to: • Understand the fundamentals of carbon capture technologies and processes. • Evaluate utilization pathways and integration with industrial operations. • Design and assess geological storage systems and site selection. • Analyze lifecycle costs, risks, and environmental impact of CCUS projects. • Support the development and execution of engineering solutions for CCUS deployment.

COURSE OUTLINE

1. Introduction to CCUS Technologies and Market Drivers 2. Engineering of Capture Processes: Post-combustion, Pre-combustion, Oxy-fuel 3. Utilization Options: Enhanced Oil Recovery (EOR), Chemicals, and Materials 4. Storage Systems Design: Site Characterization, Monitoring, and Integrity 5. Project Planning: Risk, Cost, Regulation, and Lifecycle Analysis

TARGET AUDIENCE

Process engineers, project engineers, facility designers, and environmental professionals working in oil & gas and industrial carbon management.

METHODOLOGY

Engineering case studies, process simulation demos, group design activities, and site evaluation exercises.

CONCLUSION

Participants will gain the technical foundation and practical expertise required to support CCUS

projects, from design through implementation, across diverse industrial environments.

DAILY AGENDA

Day 1: CCUS Overview and Industry Landscape

Foundations of carbon capture, global market trends, and policy landscape.

Day 2: Carbon Capture Technologies and Engineering Design

Design principles and applications of capture methods in oil & gas settings.

Day 3: Utilization Technologies and Integration

Exploring CCU solutions including EOR, fuel production, and industrial applications.

Day 4: Geological Storage and Site Engineering

Subsurface site selection, monitoring tools, and long-term containment strategies.

Day 5: Risk, Cost, and Project Lifecycle Management

Economic modeling, risk assessment, and compliance in CCUS project planning.

For more information, please contact us:
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