



## Corrosion Management in Production/Processing Operations - PF-22

### COURSE

#### About the Course

This comprehensive course will cover the main causes of corrosion in upstream oil and gas operations, as well as monitoring and mitigation methods. The various corrosion mechanisms give rise to a number of different forms of corrosion damage, which will all be considered. Participants will learn about the different aspects that make fluid corrosive, what enhances corrosion rates, and how to estimate corrosion rates of a given environment through analysis of the chemical and physical characteristics of the system; review approaches to selecting materials and coatings for corrosion resistance for different conditions and applications (including the use of NACE MR0175/ISO 15156); and be introduced to cathodic protection systems and (CP) surveys, coating systems, and many other corrosion mitigation techniques. The participant will learn how to select and utilize corrosion inhibitors for different systems, and how to select and apply corrosion monitoring techniques to create an integrated monitoring program.

The course content is based on a field facilities engineering point of view, as opposed to a more narrowly-specialized corrosion engineering or chemistry viewpoint. It provides an appropriate balance of necessary theory and practical applications to solve/mitigate corrosion-related problems. By the end of the course, work techniques to manage corrosion will have been presented: causes, assessment, identification, equipment integrity, and corrosion mitigation.

*"The explanation of how corrosion works and different types, examples were very good."* - EPST Engineer, Canada

#### Target Audience

Managers, engineers, chemists, and operators who need to understand corrosion and its control management in oil and gas production and processing.

#### You Will Learn

- The basics of corrosion chemistry
- The main corrosion mechanisms occurring in oil and gas production/processing systems
- The different types of damage caused by corrosion
- Materials selection for corrosion prevention
- Some methods for conducting cathodic protection (CP) surveys
- Items to consider in corrosion inhibitor selection
- Key advantages and disadvantages of the various corrosion monitoring methods

- Where the main locations of corrosion concern occur within oil production systems, gas processing facilities (including amine units), and water injection systems
- The principles of managing corrosion and the architecture of corrosion/integrity management systems

## Course Content

- Fundamentals of corrosion theory
- Major causes of corrosion (O<sub>2</sub>, CO<sub>2</sub>, H<sub>2</sub>S, microbiologically influenced corrosion)
- Forms of corrosion damage
- Materials selection
- Protective coatings and linings
- Cathodic protection
- Corrosion inhibitors
- Corrosion monitoring and inspection
- Corrosion in gas processing facilities
- Corrosion in water injection systems
- Corrosion management strategy and life-cycle costs

## Product Details

Categories: [Midstream](#)

Disciplines: [Mechanical Engineering](#) [Process Facilities](#)

Levels: [Foundation](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#) [Virtual](#)

Instructors: [Carlos Palacios](#)

## In-Classroom Format

29 Jul '24 2 Aug '24 - | Course | In-Classroom (in Houston) \$4,710.00

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## Virtual Format

11 Nov '24 15 Nov '24 - | Course | Virtual ( Houston UTC)

\$4,070.00

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