



Fundamentals of Offshore Systems Design and Construction - OS-4

COURSE

About the Course

This 10-day course provides a fundamental understanding of the technology and work processes used for the design and construction of all types of offshore systems, including consideration of asset development, surveillance, and management. The content includes the full range of water depths from shallow water to ultra-deep water and addresses life-cycle considerations in all phases of offshore field development and operation. All major components required for offshore developments, such as fixed and floating platforms, drilling rigs, workover equipment, pipelines, risers, process, and utilities and construction equipment are discussed. Emphasis is placed on the multi-discipline team approach needed to manage the myriad of interfaces of offshore facility design, construction, and operations. Individual and group exercises are used throughout the course. A case study for an offshore project development is included.

"It was a wonderful learning experience. Thank you, I think I have gained a lot." - Corporate Project Management, Romania

"The course was interesting, and it was surely useful to me! I have already had the opportunity to use some of the learning points seen in the training course." - Deputy Engineering Manager, Nigeria

Target Audience

Individuals with a basic awareness of or experience in offshore engineering and operations. Technical staff, project engineers, engineering discipline leads, engineering specialists, and operating staff find that this course accelerates their capability to contribute on offshore field development planning, design, and construction projects and field operations.

You Will Learn

Participants will learn how to:

- Identify the key facilities parameters that drive field development
- Recognize the best applications and characteristics of each type of offshore fixed and floating structure
- Understand the effects of the ocean environment on facilities design, construction, and operations
- Identify the impact space, loads and forces have on the structural design and global performance of offshore structures and their influence on development cost
- Describe the impact of topside facilities (well construction, well servicing, processing, and utilities) on the design of the supporting structure, together with an outline of the topsides design process

- Recognize and manage key design and operational interfaces between the major components of offshore facilities systems
- Understand the key design, construction, and installation issues associated with fixed and floating platforms and how to apply the lessons learned to your work

Course Content

- Offshore systems overview and field architecture selection
- Well construction and servicing equipment and operation
- Flow assurance
- Topsides facilities
- Oil and gas transportation facilities
- Riser systems
- Subsea systems
- Production operations
- Infrastructure impact on design and operations
- Effects of the ocean environment
- Introduction to naval architecture
- Structural design processes and tools
- Construction plans and execution
- Project management lessons learned
- Life-cycle and decommissioning considerations

Product Details

Categories: [Upstream](#)

Disciplines: [Offshore & Subsea](#)

Levels: [Foundation](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [PetroSkills Specialist](#) [Andrea Mangiavacchi](#) [Kent Saugier](#)