Offshore Systems Design and Construction Fundamentals

Course Price

£2850

Course Description

This course is intended to provide the fundamental principles and practices for the design and construction of offshore structures. Because of the multidisciplinary nature of the problems involved, the content provides a solid foundation of fundamental principles of structures, fluid and geomechanics, applied to offshore systems design and construction. At the end of each section, the theory covered in the course is explained by means of worked examples and tutorials. The main codes of practice, including API and DNV, are finally introduced and explained by means of worked examples and case studies.

Course Objectives

Who Should Attend

This intensive course is of benefit to design engineers, contractors, project engineers, logistic managers, insurers, safety officers, working in the offshore industry, who wish to enhance their understanding of the fundamental principles of design and construction of offshore structures and their implications on the design practice.

Prerequisites

This course is targeted at those individuals with a general engineering or scientific background and/or an experience in offshore engineering and operations.

Course Content

Day 1

Geological characterization of seafloor sediments

Seabed mechanics

Tutorials and worked examples
Day 2

Offshore foundations installation and design

Modelling of dynamic soil-structure interaction problems

Analysis and design of mooring systems

Tutorials and worked examples

Day 3

Fundamentals of structural dynamics applied to offshore structures

Characterization of oceanic environments (i.e. wind, wave current, tides and ice) and forces acting on offshore structures

Tutorials and worked examples

Day 4

Design and analysis of offshore structures according to API and DNV codes

Seismic requirements for offshore structures

Tutorials and worked examples

CPD Unit

Continuing Professional Development

28 HOURS CPD