

**Training Title**

**OFFSHORE STRUCTURAL DESIGN**

**Training Duration**

**5 days**

**Training Venue and Dates**

REF OE012	Offshore Structural Design	5	19-23 April 2020	\$4,500	Dubai, UAE
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In any of the 5 star hotel. The exact venue will be informed once finalized.

**Training Fees**

- 4,500US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

**TRAINING DESCRIPTION**

The course provides a broad overview of design, analysis and construction of offshore structures, one of the most demanding set of tasks faced by the engineering profession. Over and above the usual conditions and situations met by land-based structures, offshore structures have the added complication of being placed in an ocean environment where hydrodynamic interaction effects, water wave theories and structure-fluid interaction in waves become major considerations in their design.

**TRAINING OBJECTIVES**

- Develop the necessary knowledge and skills to equip professionals with a successful career through the development of critical, analytical, problem-based learning
- Apply and gain an in-depth knowledge on the different types offshore structures and designs
- Discuss offshore structures in particularly their construction, design and maintenance issues
- Gain a good understanding of codes, regulations and standards
- Get familiar to different types of offshore structure and their designs
- Get an understanding of calculating design strength, durability and design life cycle

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- Understand the various factors involved in decision making of type of offshore platform to be used according to the requirements
- Understand the stability criteria for all the massive structure floating offshore
- Develop an understanding of wave theories and spectral analysis

### WHO SHOULD ATTEND?

- Structural Engineer
- Pipeline Engineer
- Subsea Engineers
- Graduate Engineer
- Conversant Engineer switching industries and discipline
- Government regulators and analysts
- Classification society

### TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

### TRAINING SCHEDULE

#### Day 1:

- Introduction to offshore structures
- Different types of offshore structure
- Loads effects on offshore structure
- Design Parameters Specifications
- General Design Considerations
- Basics design of offshore platforms

#### Day 2:

- Design methodology for floating structure

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- Different types of floating structure
- Basic concept and dynamic analysis
- Structure optimum configuration
- Structure Reliability

**Day 3:**

- Design methodology for Tension Legged Platform
- Different types of Tension Legged Platform
- Basic concept and dynamic analysis for Tension Legged Platform
- Structure optimum configuration
- Structure Reliability

**Day 4:**

- Topsides and jacket design
- Different types of jacket
- Basic concepts of dynamic analysis
- Platform optimum configuration
- Platform construction (Case study)
- Structural Reliability

**Day 5:**

- Wave Theories; Spectral Analysis Application
- Wind and Wave Forces, Computational Hydrodynamics
- Buoyancy and Stability
- Geotechnical Engineering for offshore structure
- Offshore design philosophy
- Codes, Standards and Regulations

**NOTE:**

**Pre & Post Tests will be conducted**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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P.O BOX 45304  
ABU DHABI, U.A.E

T +971 2 6264455  
F +971 2 6275344

[www.definettraining.com](http://www.definettraining.com)