Offshore Structure Platform Design Using SACS Software Training

Description

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This course offering will review the fundamentals behind all types of offshore structures (fixed or floating) and, in the case of fixed platforms, will cover applications of these principles.

Course Objective

The overall objective is to provide participants with an understanding of the design and construction of offshore platforms, specifically:

- The theory and process of such design
- The use of current, applicable engineering methods in the design of fixed offshore platforms. In addition to the traditional lecture delivery, the course delivery emphasizes the use of group discussions and actual design problems in order to ensure participants can put the newly learned concepts to use.

Course Outline

- Design and Construction Considerations;
- Design Parameters Specifications
- General Design Considerations;
- Three Dimensional Analysis, Special Topics
- Standard and Special Steels
- Offshore Site Investigation
- Wave Theories; Spectral Analysis Application;
- Wind and Wave Forces, Computational Hydrodynamics
- Buoyancy and Stability;
- Marine Operations
- Engineering Geology of Continental Shelf;
- Offshore Piles
- Fundamental Concepts and Case Studies for Laterally Loaded Piles

- Design of Pile Foundations for Axial Loading
- CAD of Single Piles and Pile Groups under Lateral Loading
- Reliability of Pile Foundations
- Design of Tubular Members, LRFD;
- Design of Tubular Joints
- Welding & Fatigue;
- Fracture Control & Inspection
- Dynamics: Basic Concepts and Application
- Earthquake Engineering
- Soil Dynamics & Mudslides
- Structural Reliability
- Load Out Transportation & Installation