

**SHORT TERM COURSE  
ON  
FOUNDATIONS ENGINEERING FOR OFFSHORE AND  
COASTAL STRUCTURES**

*Recent Trend and Best Practice*

**Date : April 16 to 20, 2012**

**REGISTRATION FORM**

Name:.....

Designation:.....

Organization:.....

Address:.....

Telephone:.....

FAX:.....

E Mail:.....

**Registration Category**

Industry Participant (Rs. 25,000/- per participant)

College/University Faculty / Student (Rs 10,000/- per participant)

Accommodation at IIT Guest House required

Date:

Signature

**Kindly return the above to the following address:**

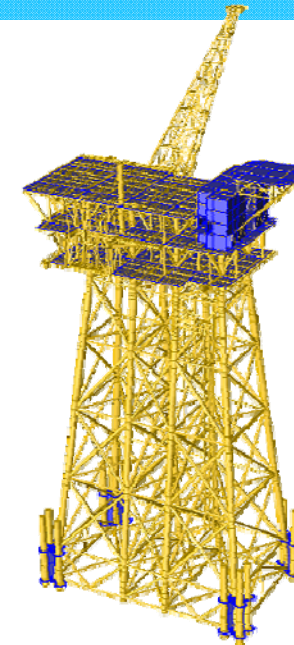
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This form should be received by the coordinator on or before 31<sup>st</sup> March 2012.

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**ANNOUNCEMENT**

**DEPARTMENT OF OCEAN ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
CHENNAI – 600 036, INDIA**

## OBJECTIVES OF THE COURSE

**Foundation Engineering** for offshore structures is an integral part of oil and gas field development projects. Similarly, the foundation design for the coastal areas plays a major role in port and harbor development. The suitable system with constructability in mind and cost effectiveness is the need of the day.

This course will cover topics that are relevant in the industry to bring update to the audience. The course contents are designed as a primer to the young engineers as well as direct application to the design for engineers from oil and gas consultants, ports, PWD, and students & teachers to initiate a drive in to understanding of the challenges faced in design of foundations for offshore and coastal environment.

The course topics have been selected to cover subjects ranging from coastal foundation such as diaphragm walls, bored concrete piles, driven steel tubular piles including recent trends and application of codes and standards to practice. Similarly, the topics in offshore application include steel tubular piles and their behavior during driving and the associated issues including soil resistance estimation during driving.

## LEVEL OF PARTICIPANTS

The course will cover basics of offshore and coastal foundation types and their design and construction methods. Hence the basic knowledge of the soil mechanics prior to the course will be an added advantage to the participants.

The course is designed such that the participants from industry, engineers from ports, public work department, college teachers and students will benefit from the course content.

## INDIAN INSTITUTE OF TECHNOLOGY MADRAS

Set in verdant wooded surroundings, the campus of IIT Madras offers an ideal environment for the most stimulating research activities. The Institute campus extends over an area of 2.5 square kilometers in Chennai, the political and cultural capital of Tamil Nadu.

The IITM campus is a self-contained township with all the facilities of a modern university, situated in wooded surroundings. The short term course will be held at the **Department of Ocean Engineering, Seminar Hall.**

## TOPICS OF LECTURE

The topics of the lectures for the **Five day** course have been carefully selected to reflect the current trend in the industry as listed below.

### Introduction

- Basic Soil Mechanics
- Geotechnical Investigation
- Pile Foundation Concepts – Steel and Concrete Piles

### Port and Harbours Structures

- Foundations for Ports and Harbour Structures
- Island and offshore Jetties
- Diaphragm walls
- Bored concrete piles

### Offshore Platforms

- Axial and Lateral Pile Capacity
- Soil Resistance to driving (SRD)
- Non-linear Pile Soil Interaction
- P-Y, T-Z and Q-Z curves for sand, soft and stiff clay
- Pile Group Effects and cyclic degradation effects on pile capacity

### Mobile Drilling Rigs

- Jackup Stability
- Spudcan penetration
- Pile – Spudcan interaction

### Pile Installation and Driveability

- Pile Installation Methods
- Smith's dynamic pile-soil model
- Pile refusal criteria and setup
- Pile Driving Stresses and Fatigue
- Pile Stickup and Associated Issues

The speakers are eminent researchers from IIT Madras and specialists from the industry.

## REGISTRATION

The registration fee for the course is Rs. 25000/- for industry participants and Rs. 10000/- for college teachers and students.

To register, complete the accompanying tear off portion of this brochure and post it to the coordinator or alternatively send an email to the coordinator.