



# MT017 : 4 days course on Deepwater Riser and Mooring Engineering



**February / July Intake**  
**Marine Technology Centre, Universiti Teknologi Malaysia**  
**Johor Bahru, Johor, Malaysia**

## COURSE OBJECTIVES

This course introduces to the design and analysis of riser and mooring systems. Emphasis is made on design of deepwater mooring and riser system by the accepted industry practices and design codes and criteria. After completing this course, the participants should be able to:

- “ Understand the types of mooring and riser system in deepwater station keeping;
- “ Understand the issues in design of mooring and riser system;
- “ Calculate and analyze static and dynamic performance of mooring and risers system;
- “ Design riser and mooring system by considering multiple factors, such as environmental loads, static equilibrium, and vibration.

## METHODOLOGY

“ Lectures, discussions, case study, project based learning

## ASSESSMENT

“ Group design project

## CONTACTS

Short Course Secretariat,  
Marine Technology Centre (P22)  
Universiti Teknologi Malaysia  
Tel : +6075535708 Fax : +6075574710  
(Also welcome for any inquiry on customised/ in-house training programmes)

## COURSE CONTENTS

COURSE CONTENTS	Duration (Hours)
1. Introduction to ocean environments and sea loads	2
2. Offshore mooring system, mooring components, mooring types	2
3. Mooring design principle, procedures, and criteria	1
4. Design of mooring system	2
5. Static and dynamic analysis of mooring system	2
6. Introduction to deepwater riser system, riser types, riser concept selection for field development	2
7. Riser design principle, procedures and criteria	1
8. Design and analysis of insystem	2
9. Issues in riser and mooring design	
“ Tension variations	1.5
“ Vortex induced vibration	2
“ Fatigue	2
“ Materials	1.5
10. Individual consultancy and group project	5
11. Group presentation	2

## COURSE TUTORS

“ Professor Dr. Adi Maimun AbdulMalik  
“ Dr. Kang Hooi Siang  
“ Dr. Nik Mohd Ridzuar Shahrudin  
“ Dr. Siow Chee Loon