



# MT018 : 4 days course on Floating Offshore Structures

19 – 22 August 2019

Marine Technology Centre, Universiti Teknologi Malaysia  
Johor Bahru, Johor, Malaysia



## COURSE OBJECTIVES

This course introduces to the wave loading and the motion of floating structure induce by wave. The content of this course is focusing in discuss the fluid structure interaction and the influence of each hydrodynamic coefficient to the motion of floating structure. After completing this course, the participants should be able to:

- Identify the different types of offshore floating structure and its motion behaviour;
- Describe the environment loading on offshore floating structure;
- Calculate the dynamic behaviour of floating structure in regular waves and irregular waves condition;
- Undertake dynamic stability assessment of offshore floating structure using computer software.

## METHODOLOGY

- Lecture, discussion, case study, project based-learning

## ASSESSMENT

- Group design project

## WHO SHOULD ATTEND

- Engineers, technical personal

## FEE

- RM 2000

## COURSE CONTENTS

- |   |   |
|---|---|
| 1. Introduction to offshore floating structure          | 3 |
| 2. Characteristic of Ocean Surface Waves                | 4 |
| 3. Wave Loading on Offshore Floating Structure          | 4 |
| 4. Floating Structure's Dynamics                        | 4 |
| 5. Floating structure's Motions in Irregular Seaway     | 4 |
| 6. Calculate the Motion Sickness Incidence              | 3 |
| 7. Prediction on the Floating Structure Down Time       | 3 |
| 8. Demonstration of Floating Structure Model Experiment | 3 |
| 9. Individual consultancy and group project works       | 5 |
| 10. Group presentation                                  | 2 |

Duration  
(Hours)

## COURSE TUTORS

- Professor Dr. Omar bin Yaakob
- Professor Dr. Adi Maimun bin Abdul Malik
- Dr. Kang Hooi Siang
- Dr. Siow Chee Loon

## CONTACT US

Short Course Secretariat,  
Marine Technology Centre (P22)  
Universiti Teknologi Malaysia  
Tel. : +607-553 5708 / +6012-770 7478  
(Attn. to : Encik Mohammad Nabil bin Jainal)  
Fax. : +607-557 4710

*(Also welcome for any inquiry on customised / in-house training programmes)*





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**Prof. Dr. Omar Yaakob** is a Professor of Naval Architecture at the Dept. of Aeronautics, Automotive and Ocean Engineering, School of Mechanical Engineering at Universiti Teknologi Malaysia. Specializes mainly in the field of marine technology, ship design, hydrodynamics, marine renewable energy, marine remote sensing, physical oceanography, marine environment, marine transport, management and operation, he had taught, conducted research and consultancy work in the said field and had published over 100 papers in conferences and journals. His most current research project is in the title of New Concept Of Wave Energy-Breakwater Device.



**Prof. Dr. Adi Maimun** is a Professor of Naval Architecture at the Dept. of Aeronautics, Automotive and Ocean Engineering, School of Mechanical Engineering. Specializes mainly in the field of Marine Vehicles/Structures Dynamics using CFD, time domain simulations and experimental work, he had taught, conducted research and consultancy work in the said field and had published over 50 papers in conferences and journals. One of his research project is the Shell Malaysia's Malikai Deepwater Riser project, a collaboration of UTM Marine Technology Center and SHELL through working to overcome the technical challenge of vortex-induced vibration, have developed new technologies that will be used in Shell's future deepwater rigs around the world.



**Dr. Henry Kang** is the Head of Marine Technology Laboratory in School of Mechanical Engineering (SME) at Universiti Teknologi Malaysia (UTM). He enjoyed a successful career as a doctoral researcher in the well-known Offshore System Simulation Laboratory until 2015 under supervision of Professor M.H. Kim in the Department of Ocean Engineering at Texas A&M University. He also served at SHELL Oil Company and 2H Offshore Inc. during his doctoral industrial training programs and involved in deep water oil and gas development projects.



**Dr. Siow Chee Loon** is a senior lecturer in School of Mechanical Engineering (SME) at Universiti Teknologi Malaysia (UTM). He research area is focusing in hydrodynamic especially in wave induce motion and propulsion of floating structure. He experience in conducting model experiment in wave basin tank, development of numerical programming for wave structure interaction analysis and using commercial software to simulate wave structure motion.