



PHYSICAL MODELLING OF MARINE STRUCTURES

When, why and how!

The aim of this four-day, thematic course is to introduce you to the basic principles of scale modelling and the methodologies involved. The main focus is on our wave generation and acquisition system Wave Synthesizer and wave analysis software within the MIKE Zero software.

Physical modelling is a recognised and well established technique for hydraulic studies. It bridges the gap between what can be simulated accurately using numerical models and the real world. It also facilitates the calibration of numerical models and increases confidence in future predictions.

When designing coastal, harbour and other marine structures it is a challenge to secure resilience against wind, water and storms as well as long-term stability. A number of hydraulic structures with water/structure/land interaction cannot be modelled numerically in a sufficient way manner. Accordingly, our physical laboratories provide test facilities.

COURSE TOPICS

- Cases suitable for physical modelling
- Scaling laws
- Metocean design conditions including climate change scenarios
- Wave generation and analysis
- Choice of scale and scaling model and materials used
- Stability testing of coastal structures in 2D and 3D
- Modelling impact forces
- Modelling vessel movements and mooring forces
- Model tests execution and results documentation
- Hands-on experience in designing and conducting coastal lab experiments

TARGET GROUP AND PREREQUISITES

Professionals employed at physical modelling laboratories or engineers carrying out supervision of model tests at physical modelling facilities for our clients.

Participants should preferably have a background in coastal, port or marine engineering and management. Some experience in using results of physical modelling is preferable but no condition.

THE ACADEMY BY DHI

THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. We offer standard and/or tailored training - face-2-face as well as online.

MIKE Powered by DHI courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems.

Thematic courses allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

Our trainers are experienced professionals, many of whom are recognised international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

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