



*Training Course:  
Port Planning and Infrastructure Design*

*6 - 10 May 2024  
Barcelona (Spain)  
Grupotel Gran Via 678*

## Training Course: Port Planning and Infrastructure Design

Training Course code: MM234841 From: 6 - 10 May 2024 Venue: Barcelona (Spain) - Grupotel Gran Via 678 Training Course Fees: 6300 € Euro

### Introduction

The main goal of this short course is to familiarize the participants with designing the layout of a port as well as the port-related structures in the port area or offshore areas such as breakwaters and berthing facilities.

### Prerequisites

Basic knowledge of the coastal processes such as wind, waves, tides, and tidal currents

### Learning objectives

Upon completion, the participant should be able to:

- List different types of sea-going vessels and identify the main characteristics of the ships
- Explain the international functions of a port and different aspects of port management
- Implement various steps in port master-planning
- Determine the main dimensions of different terminals in the port
- Determine the alignment and dimensions of the approach channel and the main dimensions of the wet infrastructure of the port
- Design the details of berthing facilities for different types of berths
- Include uncertainty in port planning and management by adaptive planning

### Target Audience

This course is useful for engineers, and infrastructure managers involved in the design and/or supervision of ports and coastal structures.

Having knowledge about the coastal processes such as wind, waves, tides and tidal currents is necessary.

### Course Outlines

The design of the port layout, including the port master planning, port basins, and terminals will be discussed.

The content of this part of the course is as follows:

- Maritime transport: various types of merchant ships; commodities and types of vessels.

- Port Master Planning: port functions and organization, port planning methodology, planning process.
- Design of Wet Areas: ship maneuvering and hydrodynamic behavior, approach channels, maneuvering areas within the port, port basins, and berth areas.
- Design of Terminals: terminal services, terminal components, types of terminals, terminal capacity, terminal dimensions.
- Introduction to queuing theory as a tool for port planning.

Also, an extensive overview of the design and construction of berthing structures bulk cargo terminals etc will be given.

This part of the course will cover site selection, investigations at the chosen site, the determination of design parameters and normal design sequence of berthing structures, typical layout, and components of berthing structures. Also, design criteria, structural considerations, construction methods, and choice of construction equipment will be discussed.

## Registration form on the Training Course: Port Planning and Infrastructure Design

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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