



# Training Course: Principles of Marine Hydrographic

23 - 27 February 2025 Sharm El-Sheikh (Egypt) Sheraton Sharm Hotel



# Training Course: Principles of Marine Hydrographic

Training Course code: MM235295 From: 23 - 27 February 2025 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel

Training Course Fees: 4200 

Euro

#### Introduction:

The Marine Hydrographic Training Program aims to provide participants with a comprehensive understanding of marine hydrography, its methodologies, tools, and applications. Participants will learn about the importance of hydrographic surveys in maritime navigation, safety, resource exploration, environmental protection, and scientific research.

### **Target Audience:**

- Hydrographic surveyors
- · Maritime navigators and ship crews
- · Marine engineers and geologists
- · Environmental scientists
- Government agencies responsible for maritime safety and management
- Oceanographers and marine researchers

### Objectives:

Upon completion of the training program, participants will be able to:

- Understand the principles and concepts of marine hydrography.
- · Apply various hydrographic survey techniques and technologies.
- Interpret hydrographic data and create accurate charts and maps.
- Identify potential hazards and navigational challenges in marine environments.

#### Outlines:

#### Day 1:

#### Introduction to Marine Hydrography

· Overview of marine hydrography: definition, importance, and scope



- · Historical development of hydrographic surveying
- Introduction to international hydrographic organizations and standards
- Fundamentals of bathymetry: measurement of water depth
- Types of hydrographic surveys: single-beam vs. multibeam, side-scan sonar, LiDAR, etc.

#### Day 2:

#### Hydrographic Survey Techniques

- Principles of hydrographic survey planning and execution
- Equipment and tools used in hydrographic surveys: echo sounders, GPS, inertial navigation systems INS, remote sensing technologies, etc.
- Data acquisition methods and procedures
- Quality control and assurance in hydrographic surveys
- · Case studies and practical demonstrations of survey techniques

#### Day 3:

#### Data Processing and Analysis

- Introduction to hydrographic data processing software
- Data editing, cleaning, and filtering techniques
- Bathymetric data interpolation and gridding
- · Generation of depth contours and 3D models
- Interpretation of hydrographic data for charting and mapping purposes

#### Day 4:

#### Charting and Cartography

- Principles of nautical chart production
- Introduction to chart symbology and conventions
- Digital charting technologies and electronic navigational charts ENCs
- Techniques for updating and maintaining nautical charts



#### Day 5:

#### Applications of Marine Hydrography

- Role of hydrographic surveys in maritime navigation and safety
- Applications of hydrography in offshore oil and gas exploration, underwater infrastructure development, and marine resource management
- Environmental applications of marine hydrography: habitat mapping, coastal zone management, marine conservation
- Emerging trends and future directions in marine hydrography



## Registration form on the Training Course: Principles of Marine Hydrographic

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

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