



*Training Course:
Mastering Hydrography: Advanced Training in
Modern Marine Sciences*

*22 - 26 November 2026
Sharm El-Sheikh (Egypt)
Sheraton Sharm Hotel*

Training Course: Mastering Hydrography: Advanced Training in Modern Marine Sciences

Training Course code: MM235307 From: 22 - 26 November 2026 Venue: Sharm El-Sheikh (Egypt) - Sheraton Sharm Hotel
Training Course Fees: 5100 € Euro

Introduction

Hydrography is a critical discipline within marine sciences, focusing on the measurement and description of physical features of oceans, seas, coastal areas, and inland waters. It plays a vital role in ensuring safe navigation, supporting offshore operations, coastal development, environmental protection, and marine resource management.

This program, developed by [Global Horizon Training Center](#), provides an advanced and integrated approach to modern hydrography, combining scientific principles, cutting-edge technologies, and practical applications. It covers hydrographic surveying techniques, data acquisition and processing, seabed mapping, and the use of advanced marine instruments and software.

Participants will gain comprehensive knowledge and hands-on understanding of hydrographic methods, enabling them to contribute effectively to marine research, navigation safety, and offshore engineering projects.

Course Objectives

By the end of this program, participants will be able to:

- Understand the principles and scope of hydrography and marine sciences
- Apply modern hydrographic surveying techniques
- Operate hydrographic equipment and systems
- Acquire, process, and analyze hydrographic data
- Interpret seabed mapping and bathymetric information
- Utilize GIS and marine data visualization tools
- Support navigation safety and marine infrastructure projects
- Apply best practices in environmental and coastal monitoring

Target Audience

This program is designed for:

- Hydrographic Surveyors and Marine Scientists
- Marine Engineers and Offshore Professionals
- Port and Coastal Management Personnel
- GIS and Geospatial Specialists
- Environmental and Oceanography Professionals
- Government and Maritime Authority Staff

Outline

Day 1: Fundamentals of Hydrography and Marine Sciences

- Introduction to Hydrography and Its Applications
- Role of Hydrography in Navigation and Marine Development
- Oceanographic and Geospatial Fundamentals
- Coordinate Systems and Positioning GPS/GNSS
- Overview of Hydrographic Survey Standards IHO Guidelines

Day 2: Hydrographic Surveying Techniques and Equipment

- Survey Planning and Design
- Single Beam and Multibeam Echo Sounders
- Side Scan Sonar and Sub-bottom Profilers
- Tides, currents, and water level measurements
- Calibration and quality control procedures

Day 3: Data Acquisition and Processing

- Hydrographic Data Collection Methods
- Data Quality Assurance and Validation
- Processing Bathymetric Data
- Use of Hydrographic Software Tools
- Generating Charts and Mapping Outputs

Day 4: Seabed Mapping and Geospatial Analysis

- Bathymetric Mapping and Visualization
- GIS Applications in Hydrography
- Seabed Classification and Analysis
- Marine Spatial Planning
- Case Studies in Coastal and Offshore Projects

Day 5: Advanced Applications and Future Trends

- Hydrography in Offshore Energy and Infrastructure
- Environmental Monitoring and Coastal Management
- Autonomous Survey Systems USVs, AUVs
- Digital Hydrography and Smart Marine Systems
- Final Workshop: Designing a Hydrographic Survey Project

Registration form on the Training Course: Mastering Hydrography: Advanced Training in Modern Marine Sciences

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