



*Training Course:
Navigating the Depths: Comprehensive Training
in Nautical Chart Production*

*7 - 11 March 2027
Cairo (Egypt)*

Training Course: Navigating the Depths: Comprehensive Training in Nautical Chart Production

Training Course code: MM235305 From: 7 - 11 March 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Nautical charts are fundamental to safe and efficient maritime navigation, providing critical information on water depths, seabed features, hazards, and navigational aids. As maritime operations become increasingly data-driven and technology-oriented, the need for accurate and standardized chart production has become more essential than ever.

This program, developed by [Global Horizon Training Center](#), provides a comprehensive and practical approach to nautical chart production. It integrates hydrographic data processing, cartographic principles, and international standards such as [IHO S-57 and S-101](#), enabling participants to produce high-quality nautical charts for both traditional and electronic navigation systems.

Participants will develop the competencies required to transform raw hydrographic data into reliable chart products, ensuring accuracy, compliance, and support for maritime safety and operational efficiency.

Course Objectives

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

- Understand the principles and importance of nautical chart production
- Apply international hydrographic and cartographic standards
- Process and integrate hydrographic data into chart formats
- Design and produce paper and electronic nautical charts ENC
- Ensure quality assurance and accuracy in charting processes
- Utilize GIS and specialized chart production tools
- Represent navigational features and hazards effectively
- Support maritime safety through accurate chart outputs

Target Audience

This program is designed for:

- Hydrographic Surveyors and Marine Cartographers
- GIS and Geospatial Specialists
- Marine Engineers and Navigation Officers
- Port and Maritime Authority Personnel
- Coastal and Offshore Project Professionals
- Professionals involved in marine data analysis and mapping

Outline

Day 1: Fundamentals of Nautical Chart Production

- Introduction to nautical charting and its role in navigation
- Types of charts paper charts and Electronic Navigational Charts - ENC
- Chart elements: scales, projections, and symbols
- Overview of IHO standards S-57, S-101
- Relationship between hydrographic surveys and chart production

Day 2: Hydrographic Data Preparation and Integration

- Sources of hydrographic data survey vessels, sensors, satellites
- Data cleaning, validation, and quality control
- Bathymetric data processing
- Tidal corrections and vertical datums
- Preparing datasets for chart compilation

Day 3: Chart Compilation and Cartographic Design

- Principles of marine cartography and visualization
- Feature generalization and symbolization
- Layer structuring and data organization
- Producing clear, accurate, and user-friendly charts
- Case exercises on chart design

Day 4: Electronic Navigational Charts ENC Development

- Introduction to ENC production and standards
- S-57 and S-101 data structures and encoding
- Use of GIS and chart production software
- Data validation and interoperability
- Distribution and updating of ENC data

Day 5: Quality Assurance, Maintenance, and Future Trends

- Quality control procedures and validation techniques
- Error detection and correction in chart production
- Updating and maintaining nautical charts
- Emerging technologies automation, AI, digital hydrography
- Final workshop: developing a complete nautical chart project

Registration form on the Training Course: Navigating the Depths: Comprehensive Training in Nautical Chart Production

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

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