Global Horizon
TRAINING CENTER

Training Course

Hydrography and Ocean Mapping

Description

The Hydrography and Ocean Mapping course at Global Horizon is designed for professionals and students who wish to enter the field of hydrography. This course provides practical training in hydrographic survey methods, data collection, processing, and analysis, preparing participants for careers in ocean mapping and marine research. The course combines theoretical learning with hands-on experience using industry standard software and survey equipment.

Objectives

- Understand the fundamentals of hydrography and its applications in ocean mapping.
- Develop skills in hydrographic data collection, processing, and analysis.
- Learn to configure, operate, and troubleshoot hydrographic survey equipment.
- Gain proficiency in using Python for hydrographic computations.
- Perform quality control and evaluate hydrographic data against international standards.
- Create bathymetric maps and assess survey results for various marine applications.

Who Should Attend?

- Marine Scientists & Researchers
- Hydrographic Surveyors
- Environmental and Coastal Engineers
- Marine Resource Managers
- Students and Professionals in Marine Geosciences

Course Outline

Day 1: Introduction to Hydrography

- Overview of hydrographic principles and applications
- Understanding bathymetry, tides, currents, and seabed mapping

- International hydrographic standards and regulations

Day 2: Hydrographic Data Collection and Survey Equipment

- Introduction to multibeam and single-beam sonar systems
- Use of satellite positioning and geodetic principles
- Onboard hydrographic survey techniques and methodologies

Day 3: Data Processing and Analysis

- Quality control techniques for hydrographic data
- Processing bathymetric data using industry-standard software
- Creating and analyzing bathymetric surfaces

Day 4: Applications of Hydrography in Marine Research

- Coastal zone management and habitat mapping
- Hydrography in renewable and non-renewable resource management
- Case studies in environmental monitoring and marine geophysics

Day 5: Final Project and Practical Applications

- Hands-on survey project planning and execution
- Data collection, processing, and reporting
- Presentation of survey findings and quality assessment