

What is IoT in Shipping - Introduction to Marine Electronics & Smart Yachts

Duration: 50 hours



Program Description: This 50-hour online program introduces participants to the world of the Internet of Things (IoT) in shipping and Smart Yachts. Using a simple, practical approach, it explains how sensors and connected devices work together to improve safety, energy efficiency, and onboard comfort. It is aimed at beginners, crew members, technicians, officers, and shipping professionals.

Participants will learn to understand what IoT is and how it is applied in shipping, recognize basic vessel electronic systems, understand the operation of sensors and connected devices, identify how data improves vessel operation, apply simple maintenance and safety practices, and grasp the importance of connectivity in Smart Yachts.

Target Audience:

- Crew members, officers & technicians
- Shipping company personnel
- Boat owners and new professionals who want to understand marine electronics

Course Modules (50 hours):

- **Introduction to IoT in Shipping (6 hours):** What the Internet of Things is, how it relates to shipping, examples of applications on ships and yachts, benefits and challenges.
- **Sensors and Connected Devices (8 hours):** Types of sensors (temperature, pressure, RPM, vibration), data collection and transmission, integration into ship networks, examples from Smart Yachts.
- **Vessel Electronic Systems (8 hours):** Batteries and inverters, GPS and VHF, control and monitoring panels, energy management and automation.
- **Onboard Connectivity and Networks (6 hours):** WiFi, Bluetooth, satellite communication, how devices connect to each other, network security and data protection, practices for small and large vessels.
- **Smart Yachts and Automation (8 hours):** What makes a vessel "smart," consumption and maintenance monitoring, IoT applications for comfort and safety, examples from modern yachts.
- **Data and Information Analysis (6 hours):** Utilizing sensor data, dashboards and reports, introduction to predictive maintenance.
- **Practical Applications and Workshop (8 hours):** Examples from real vessels, sensor operation simulation, monitoring and analysis tools, simple exercises for beginners.

Learning Outcomes: Upon completion of the program, participants will be able to: understand the operation of IoT in shipping, recognize basic vessel electronic systems, interpret data from sensors, apply connectivity and safety practices, and perceive the importance of Smart Yachts in modern shipping.