BLACKBIRD FOR TRAINING

# Electronic Chart Display and Information System Training Course



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## Introduction:

This Electronic Chart Display and Information System Training Course equips you to execute compliant passage plans and conduct safe bridge watchkeeping across one week. You will construct an Audited ECDIS Passage Plan and Watchkeeping Portfolio incorporating safety contour calculations, sensor validation logs, and contingency track monitoring sheets. You need baseline knowledge of chartwork and navigational watchkeeping principles, as this practitioner-level course develops operational proficiency from display setup to emergency sensor failure management. You will practise in high-fidelity simulator scenarios, handling alarms, cross-checking positions against manual fixes, and managing route deviations.

## Course Objectives:

- Build standard-compliant passage routes and safety corridors using IMO Resolution MSC.23282 criteria
- Calculate vessel safety depths and safety contours using draft, squat, and tidal allowance matrices
- Run automated route checks and detect geometric chart hazards using electronic navigational chart query tools
- Test navigational sensor data integrity and dead-reckoning fallback modes using IEC 61174 simulator controls
- Draft comprehensive electronic chart update logs and backup folio procedures adhering to IMO MSC.1/Circ.1503/Rev.1 guidance

## Target Audience:

- You navigate commercial vessels and maintain bridge navigational watches using electronic chart display systems
- You plan ocean, coastal, and confined waters passages using electronic navigational charts and route planning tools
- You verify sensor inputs, depth contours, and bridge alert parameters during operational navigational watches
- You supervise chart data installations, permit licensing renewals, and official ENC update applications onboard ships



## Course Outline:

### Day 1: Configuring Legal Frameworks and Electronic Chart Displays

- Reviewing carriage requirements under SOLAS Chapter V Regulation 19.2.10
- Configuring display presentation libraries according to IHO S-52 standards
- Loading official electronic navigational charts using IHO S-57 formats
- Applying chart security authentication using IHO S-63 data protection
- Build: Baseline ECDIS Display Configuration and Chart Inventory Log

### Day 2: Calculating Safety Depths and Designing Navigational Routes

- Determining vessel safety contours using ship dynamic draft calculations
- Plotting track waypoints and cross-track limits using ECDIS tables
- Running automated route topology validations using ENC safety engines
- Setting safety depths using under-keel clearance policies and tables
- Build: Validated Waypoint Database and Safety Contour Calculation Sheet

### Day 3: Executing Route Monitoring and Managing Sensor Inputs

- Integrating positioning sensors and gyro inputs complying with IEC 61174
- Verifying vessel position integrity using radar overlays and parallel indexing
- Managing bridge alert management alarms following IMO MSC.23282 specifications
- Executing watch handovers using standard bridge watchkeeping checklist protocols
- Build: Sensor Monitoring Checklist and Watchkeeping Handover Record

### Day 4: Resolving Operating Anomalies and Applying Chart Corrections

- Applying manual and digital updates using IMO MSC.1/Circ.1503/Rev.1 guidance
- Managing sensor failure conditions by switching to dead-reckoning modes
- Detecting display anomalies using temporary and preliminary ENC notices
- Configuring secondary backup folios using independent approved navigation systems
- Build: Anomaly Resolution Log and ENC Update Maintenance Record

### Day 5: Conducting Simulator Scenarios and Final Passage Execution

- Navigating confined waters simulator scenarios using STCW Code Section A-I/12
- Executing emergency evasive maneuvers while monitoring active depth vectors
- Resolving multiple sensor corruption alarms under real-time watchkeeping constraints
- Auditing passage execution tracks against planned cross-track error boundaries
- Build: Audited ECDIS Passage Plan and Watchkeeping Portfolio



## Skills You Will Gain:

- IHO S-52 Display Customisation
- IMO MSC.23282 Safety Parameter Setting
- IHO S-63 ENC Decryption Management
- ENC Automated Route Validation
- IEC 61174 Sensor Integrity Auditing
- Bridge Alert Management Prioritisation
- ECDIS Dead-Reckoning Navigation Fallback

## Why Attend This Course:

- Configure display layers, safety depths, and safety contours accurately to prevent grounding risks during navigation
- Validate electronic navigational chart permits and apply weekly digital notices systematically without operational interruption
- Manage critical bridge alerts, sensor failures, and GPS spoofing events effectively during dense traffic passages
- Produce an Audited ECDIS Passage Plan and Watchkeeping Portfolio that demonstrates rigorous navigational safety compliance

## Conclusion:

Returning to your organisation, you will immediately present your Audited ECDIS Passage Plan and Watchkeeping Portfolio to your master and lead navigation officer to review safety contour formulas and route checking criteria. You will lead bridge watchkeepers through the standard safety depth settings and ENC update verification worksheets during pre-voyage briefing meetings. After completing your vessel's first scheduled voyage under the updated guidelines, you will review cross-track error logs and sensor variance records to confirm that bridge teams operate ECDIS safely within approved margins.

## Frequently Asked Questions FAQ:

### What will you be able to do after this Electronic Chart Display and Information System Training Course?

You will be able to plan, validate, and execute voyages on type-approved ECDIS equipment. You will calculate safety contours, manage Bridge Alert Management notifications, apply ENC updates in accordance with IMO MSC.1/Circ.1503/Rev.1, and operate fallback dead-reckoning navigation during primary sensor dropouts.



## What do you need to know before starting this Electronic Chart Display and Information System Training Course?

You need foundational knowledge of terrestrial navigation, chart symbols, passage planning principles, and standard bridge watchkeeping procedures under STCW. Prior operational experience with radar, gyro compasses, and position-fixing methods ensures you can focus immediately on digital chart workflows and simulator exercises.

## What deliverable do you build during this Electronic Chart Display and Information System Training Course?

You build an Audited ECDIS Passage Plan and Watchkeeping Portfolio. This deliverable includes a fully validated multi-leg route file, safety contour and under-keel clearance calculations, sensor failure contingency workflows, an ENC maintenance log, and simulator watchkeeping execution checklists.

## How does this Electronic Chart Display and Information System Training Course differ from a paper chart navigation course?

This course focuses on electronic chart engines, vector data layers, and automated alarm parameters rather than manual plotting on paper. You master digital safety contours, sensor integration, electronic chart updating, and automated route verification tools that do not exist on traditional paper charts.

