

# MDK 431 - ECDIS

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## Course Description

The purpose of this course is to meet the training requirements in STCW, as amended, for the operational use of Electronic Chart Display and Information Systems (ECDIS). This course provides the knowledge, skill and understanding of ECDIS emphasizing both the application and learning of ECDIS in a variety of underway contexts. This is achieved through use of a sophisticated navigation simulation integrated with a type-approved ECDIS. STCW.

## Credit Hours

3

## Contact Hours

3

## Lecture Hours

3

## Required Prerequisites

All prerequisites for all GLMA courses are satisfied by following the approved Course Sequence Guide and any deviation from this guide needs to be approved by the cadet's adviser.

## Recommended Prerequisites or Skills Competencies

ENG 111; MTH 111 or higher

## Course Learning Outcomes

### Knowledge:

- Recall the International Maritime Organization (IMO) performance standards for electronic chart display and information systems (ECDIS).
- Identify the unique features of IMO approved navigational charts.

### Application:

- Demonstrate knowledge, understanding and proficiency of ECDIS chart manipulation, passage planning, navigation, and file management.
- Describe the limitations and common errors of ECDIS.

### Integration:

- Analyze data from differing navigational sensor inputs and assess their influence upon the ECDIS.
- Correlate the data displayed on an ECDIS with other navigational aids including human sensory perceptions.
- Incorporate the use of ECDIS into the standardized navigational watch procedures to augment situational awareness.
- Utilize their computing skills when controlling the ECDIS user interface.

### Human Dimension:

- Recognize how the complexity of ECDIS system draws the human attention away from other critical tasks.
- Reflect on how computerization and Global Navigation Satellite Systems (GNSS) has changed the traditional role of the ship's officer.

### Caring - Civic Learning:

- Demonstrate how to use the ECDIS to safely navigate a vessel thereby reducing the probability of a marine casualty.
- Recognize the ethical requirement for keeping complete navigational records.

### Learning How to Learn:

- Employ collaboration and/or self-study techniques while learning the type-specific user interface of the ECDIS.
- Demonstrate the STCW Code KUPs for Officer in Charge of a Navigation Watch: 1.3.C, 1.4.C, 1.4.D, 1.5.A, 2.7.C, 4.1, 4.2.