”MIRCEA CEL BĂTRÂN” NAVAL ACADEMY
NAVIGATION AND NAVAL MANAGEMENT FACULTY
NAVIGATION AND NAVAL TRANSPORT DEPARTMENT

CHART WORK ROOM 3

The chart work hall facilitates the teaching/learning process for the following disciplines: ***Navigation Fundamentals, Celestial Navigation, Orthodromy*** and ***Radio-electronic Navigation,*** the objectives of which are:

General objective:

- ✓ The knowledge, understanding, defining, and correct application of the notions used in the navigation fundamentals, dead reckoning, celestial navigation, the ability to correctly use the navigational charts and nautical documents.

Specific objectives

- ✓ Ability to make a fix using coastal landmarks, navigation aids, including lights, buoys and beacons, dead reckoning, leeway, tides, currents and estimated speed.
- ✓ Ability to project the terrestrial surface on the nautical chart, to easily use the chart catalogue and to correct the nautical documents and charts including the electronic charts of the ECDIS type; STCW AII/1.
- ✓ Ability to identify chart symbols and abbreviations and to recognise the buoys described in the Maritime Buoyage System, Systems "A" and "B" of the International Association of Lighthouse Authorities (IALA)

- ✓ Ability to use navigation charts and nautical publications (nautical instructions, tide ephemerides, navigation warnings and shipping routing information); STCW AII/1;
- ✓ Ability to use the nautical publications on tides and currents and do the corresponding tide prediction calculations; STCW AII/1;
- ✓ Ability to do the proper calculations required by dead reckoning navigation which shall take into consideration the leeway, the tide, the currents and the estimated speed within a period of 24 hours, on chart or plotting; STCW AII/1;
- ✓ Ability to make a fix using the celestial bodies; STCW AII/1.

Chart work hall facilities

- Video-projector, laptop connected to the internet, white boards
- Chart work tables and chairs for 44 students
- Navigation charts
- Nautical publications
- Magnetic compass repeater
- Navigating instruments

List of laboratory training activities

1. *Mounting/dismantling the magnetic compass alidade and the gyro-repeater. Bearing and course reading.*
2. *Error calculation in determining the ship's position using different position line combinations.*
3. *Complex dead reckoning and coastal navigation problems solving.*
4. *Determination of the absolute state of the navigation chronometer. Applications regarding the calculation of the Greenwich mean time to the moment of observation.*
5. *Numerical and tracing applications on the Mercator chart regarding the determination of the ship's position using two and three simultaneous celestial bodies observations. (Competency I.1, A -II /1, STCW).*
6. *Numerical and tracing applications on the Mercator chart regarding the determination of the ship`s position using successive celestial bodies observations. (Competency I.1, A -II /1, STCW).*
7. *Passage planning using the gnomonic charts.*