„MIRCEA CEL BATRAN" NAVAL ACADEMY
NAVIGATION AND NAVAL MANAGEMENT FACULTY
NAVIGATION AND NAVAL TRANSPORT DEPARTMENT

EQUIPMENT AND NAVIGATION SYSTEMS 2

The cabinet is the place where practical activities in *Equipment and navigation systems* are held. It pursues the following objectives:

General objective:

-to know, understand, analyze and apply the consequences of physical phenomena underlying the operation of the equipment and navigation systems.
- to state and explain the constructive and functional features of the types of equipment and navigation systems used on ships

Specific objectives

- ✓ To be able to determine magnetic compass errors using astronomical and terrestrial instruments, and to introduce corrections for these errors
- ✓ To correlate the data and the navigation equipment systems indications with direct observations, so as to guarantee the safety of navigation, ship and crew
- ✓ To be able to operate the machinery and electrical appliances used in navigation

Material and didactic support

♦Magneto-Hydrodynamic LEM 1N Loch
♦MGL 25 Loch
♦ ELAC sounder
♦KUBAN sounder
♦ARP 50 sounder
♦ GALS hyperbolic receiver
♦video projector, laptop connected to internet, interactive whiteboard
♦tables and chairs for the students

List of laboratory works

1. *Description of lochs' components*
2. Operations to commissioning, checkings, and specific adjustments of lochs
3. Description of the magnetic compass
4. Exploitation of the magnetic compass.
5. Practical compensation of the magnetic compass.
6. Determination of deviations by comparing courses and bearings.
7. Elaboration of the deviation table by calculating the coefficients using the deviations observed in 8 magnetic courses