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

THEORY AND NAVAL ARCHITECTURE

Destination:

The numerical laboratory for Theory and Naval Architecture is meant for the teaching/learning process of the following disciplines: Theory and Naval Architecture, Ship Theory, Complements of ship dynamics, CAD/CAE methods for initial ship design. Management of ship stability, trim and structural load.



This laboratory addresses second and third year undergraduate students as well as first and second master degree students.

Facilities:

There are 20 computers in a network system on which there are installed the following software: Autoship, Fluent, Ansys, Matematica, Solidworks.

Other teaching materials include: video-projector and screen, a smartboard, a magnetic board.



Training Capabilities:

On using the computer software the students can achieve the following:

-hull design and spacing using Autoship, Model Maker și Solid Works;

 load design in compliance with the IMO provisions regarding the flotability, stability and structural load of ships;

- the study of flotability, stability and longitudinal resistance of the ship by using Autohydro; - determination of hull forward movement resistance and improvement of propeller parameters by using Autopower;

- small craft design by using Autoyacht;

- determination of ships structural elements by using Autoplate şi Autostructure.

This laboratory has been used by the teaching staff for research purposes in the following projects:

- Research contract CEEX - X2C35/2006: *Mixed for land and naval rapid intervention in case of natural calamities;*

- Research Contract CEEX - X2C17/2006: Hydroenergetic Systems for conversionstorage-distribution of renewable energies meant for the ecological river transport in the protected warerways;

- MoD Research Contract: Inflatable naval targets made from textile materials;

- Research Contract no. 12116/01.10.2008: The Technoloical Platform TOYROV used for the design of underwater minirobots remotely controlled by cable. They are used for both utilitarian and entertainment purposes.