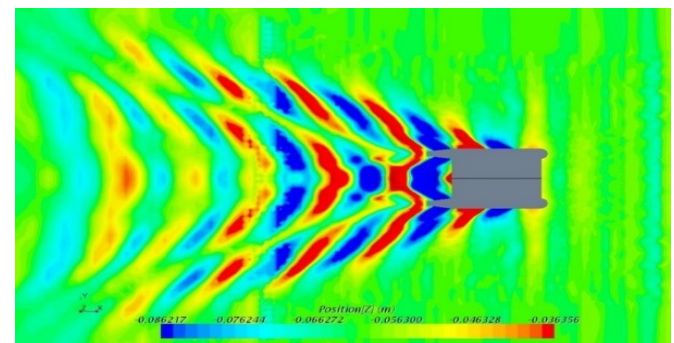
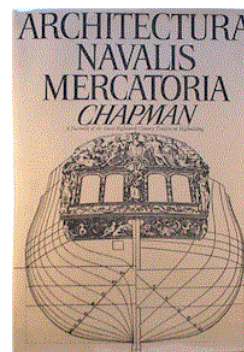
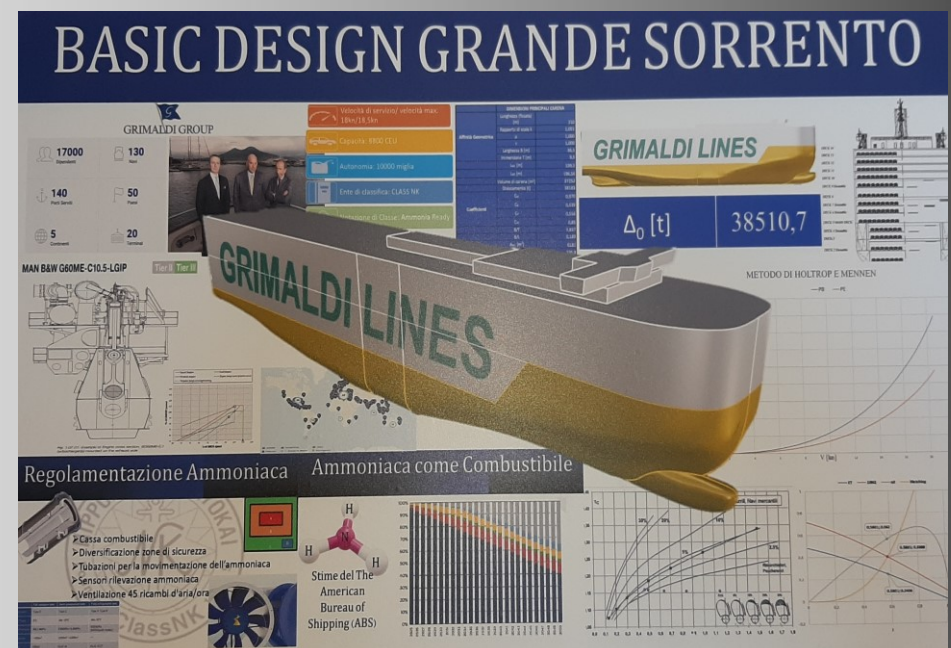


Ship Design

Carlo F.M. Bertorello



Abstract: Present and future scenarios of Ship Design. Types of ships, reference regulations, DWT, net capacity, stowage factor, evaluation of main dimensions, modular payloads and their influence on dimensions. Database analysis and MADM for comparison of existing projects. Tonnage, Load Lines, General Plans. Hull form definition and modifications. Ergonomics, comfort and conditions of wellness. High Speed and Small Craft. Technical aspects of Ship management. Regulations and performance indices. Sustainability indices. Energy Saving. Zero Emission Capabilities. References for evaluation of displacement, powering and maneuverability performances.



Contents of the Course

L1 Present scenarios for Ship Designers. Physical environment. Regulatory and sustainability frames. Ship designers and ship design. Available tools.

L4 Volumetric and other types of ships – Peculiar Characteristics and Main Dimensions Evaluation.

L7 Hull form elements – Hull form Representation and Modification.

L10 Hybrid and alternative auxiliary propulsions – Zero Emission Capabilities. Life Cycle Assessment.

A13 APPENDIX 1 References for Displacement Prediction

L2 Basic Ship Features - DWT and Volumetric Ships - Meaningful Parameters. Stowage factor. Displacement. Main dimensions. Non dimensional coefficients.

L5 Containerships - Peculiar Characteristics and Main Dimensions Evaluation.

L8 Load line, Tonnage and Regulatory frame.

L11 Ship Design to Ship Management – Energy Savings

A14 APPENDIX 2 References for Powering Prediction

WS 16-Basic design WORKSHOP-Notes for Development and Presentation

L3 First steps in design procedure - Main dimensions evaluation for DWT ships. Main dimensions assessment for a given DWT and cruising speed. Types of DWT ships.

L6 Data base Analysis and Multi Attribute Decision Making for ranking existing Ships.

L9 High Speed Craft and Small Craft.

L12 Wellness and comfort onboard.

A15 APPENDIX 3 References for maneuverability assessment



University of the Aegean



UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II



University of Zagreb
Faculty of Mechanical Engineering
and Naval Architecture

Co-funded by the
Erasmus+ Programme
of the European Union

