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| Course Title | **Naval Architecture - Design** |
| Course Code | MANS-133 |
| Course Type | Required |
| Level | 1st Cycle |
| Year / Semester | 1st Year, Spring Semester |
| Teacher’s Name |  |
| ECTS | 4 | Theory | Laboratory | Simulation | Tutorial |
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| Course Purpose and Objectives | The main objectives of the course are to:* introduce all the major structural parts and elements of the vessel
* explain the most important watertight subdivision issues
* demonstrate the ship’s blueprints
* present the terminology of the various types of rudders and screws
* present the basic drawing tools and materials
* display the typical ways that an object can be represented on paper
* exhibit the basics on mechanical and architectural design
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| Learning Outcomes | After completion of the course students are expected to be able to: * name all the major structural parts and elements of the vessel
* comprehend the basic details of any vessel’s watertight subdivision, drawing information out of the ship’s plans and manuals
* locate any structural point on the blueprints and vice versa
* name the major parts of the various types of rudders and screws
* handle all basic drawing tools and materials
* represent simple objects and components on paper exercising the basic principles of mechanical and architectural design
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| Prerequisites | None | Required | None |
| Course Content | * Vessel reinforcement systems
* Double bottoms, purpose and construction
* Structural solution to the problem of pounding
* Structural reinforcement to confront the head on stresses
* Upper deck constructions
* Stern construction
* Upper deck construction
* Section plans
* Piping networks
* Corrosion and similar problems
* Underwater hull pollution prevention
* General description of rudders
* General description of screws
* Generalities about design
* Axonometric presentation
* Drawing with orthographic projections
* Vess Lectures, in-class assignments, sound and video equipment, computer, projector el’s blueprints
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| Teaching Methodology | Lectures, in-class assignments, sound and video equipment, computer, projector |
| Bibliography | 1. **Required Textbooks/Reading:**

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| --- | --- | --- | --- | --- |
| **Authors** | **Title** | **Publisher** | **Year** | **ISBN** |
| Eyres, D., J. | Ship construction | Butterworth - Heinemann | 2001 | 0 7506 4887 2 |

1. **Recommended Textbooks/Reading:**

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| --- | --- | --- | --- | --- |
| **Authors** | **Title** | **Publisher** | **Year** | **ISBN** |
| Dr D. A. TaylorDr Alan ST Tang | Merchant Ship Naval Architecture | IMAREST | 2006 | 1-902536-56-8 |
| Dr D. A. Taylor | Merchant Ship Construction 4th | IMAREST | 2000 | 1-9022536-00-2 |

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| Assessment | Homework, in-class assignments, projects, exams, final exam. |
| Language | English  |