

ANNOTATION

| Marine Auxiliary Machinery And Systems 75 hours, mandatory | | ESTC credits: 5 | |
|---|--|---|-----------|
| Department: Ship Power Systems | | Lectures: Assist. Prof . Ph.D. Dragiya Yanulov Exercises: Assist. Prof . Ph.D. Dragiya Yanulov | |
| <p>Learning objectives: Students SHOULD KNOW:</p> <ul style="list-style-type: none"> - operating principles, theoretical basics and design features of marine hydraulic and pneumatic machinery and systems; - operating mode specifics and rules for effective operation of machinery and systems; - requirements applied to marine machinery and systems, criteria and methods for their technical state assessment and determination of their operating modes; - rules for operating of marine machinery and systems and safety techniques employed in it; <p>Students SHOULD BE ABLE TO:</p> <ul style="list-style-type: none"> - prepare the equipment for operation, to start it, to serve systems and equipment while they are in operation, to shut it down and carry out maintenance while the equipment is not operating; - compose operational instructions and to keep the documentation of marine systems and equipment; - apply safety techniques during the operation of systems and equipment; - organize and conduct systems and equipment in order to determine their effective mode of operation. | | | |
| <p>Assessment system: The trainees' progress in the acquisition of the material is controlled at the end of each topic. The theoretical knowledge of the trainees is assessed with questionnaires and tests. Their practical knowledge is assessed with reports and oral assignments. <i>(Only students who have done and passed the semester tests and tasks successfully are allowed to sit for the examinations.)</i></p> | | | |
| Contents: | | | |
| No. | Subject area (modules) | Lectures | Exercises |
| | PART ONE Section I. Marine hydraulic and pneumatic machines | | |
| 1 | Introduction | 3 | 0 |
| 2 | Hydraulic and pneumatic machines – positive displacement type | 13 | 2 |
| 3 | Hydraulic and pneumatic machines – rotodynamic type | 8 | 4 |
| | Section II. Hydraulic, pneumatic and steam power drive systems onboard ships. | | |
| 4 | Hydrostatic drive systems. Pneumatic power drives | 9 | 2 |

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| | Total for Part One | 30 | 8 |
| | PART TWO | | |
| | Section III. Marine systems | | |
| 5 | Classification, requirements, system components and sizing | 2 | 0 |
| 6 | Systems providing ship functions | 4 | 0 |
| 7 | Machinery service systems | 8 | 2 |
| 8 | Systems providing the seaworthiness of the ship | 2 | 0 |
| 9 | Pollution prevention systems | 4 | 2 |
| 10 | Systems providing proper living conditions for the staff | 10 | 3 |
| | Total for Part Two | 30 | 7 |
| | Total | 60 | 15 |