

RTU Course "Engine Room Simulator"

0J000 Latvian Maritime Academy

General data

Code	JA0130
Course title	Engine Room Simulator
Course status in the programme	Internship
Responsible instructor	Rauls Klaučāns
Volume of the course: parts and credits points	1 part, 3.0 credits
Annotation	Training on the engine room simulator helps to strengthen students' theoretical knowledge and practical skills regarding the operation of ship mechanisms, equipment and systems. The training corresponds to the methodology developed by the UNITEST company (Poland) and is as close as possible to the list of topics to be learned in accordance with the A-III/1, A-III/2 standards of the STCW Code, taking into account the 2010 amendments to the STCW Convention. The study course includes the relevant sections of the IMO Module Course 7.04 on the engine room simulator and contains the recommendations of the IMO Module Course 2.07 "Engine Room Simulator". The course is delivered in compliance with the practical tasks, which are realistic, tested and approved (see appendices). Part-time extramural studies are organized according to an individually developed study plan.
Goals and objectives of the course in terms of competences and skills	The aim of the study course is to strengthen and develop the theoretical knowledge and practical skills of students and experienced seafarers regarding the operation of ship mechanisms, equipment and systems. The task of the study course is to provide sufficient knowledge and skills to operate, monitor and control the operation of ship machinery and engineering systems in accordance with the Sections A-III/1, A-III/2, A-VIII/2 and B-VIII/2 of the STCW Code.
Structure and tasks of independent studies	Self-study of the course literature. Simulation of the operation of the ship's auxiliary mechanisms and systems using computer simulators. Processing and analysis of simulated results. Organization: students are given individual tasks, where the progress of task solutions and the conclusions and proposals of the analysis of the obtained results are checked.
Recommended literature	Obligātā/Obligatory: 1. Taylor, D.A. Introduction to Marine Engineering. 2nd ed. London, Butterworth. 1990; Papildu/Additional 1. Diesel engines for ship propulsion and power plants Volumes I and II. K. Kuiken Target Global Energy; 2. Pounder's Marine Diesel Engines and Gas Turbines 8 th edition.
Course prerequisites	Good theoretical knowledge of the construction and operation of ship's machinery and engineering systems. Good knowledge of English with regard to technical terminology. Good computer skills.

Learning outcomes and assessment

Learning outcomes	Assessment methods
Knowledge. Knows the operation of ship machinery, equipment and systems.	Methods: performance of practical tasks using a simulator, test using CBT, final test. Evaluation criteria: able to demonstrate knowledge in the operation of ship mechanisms, equipment and systems using the engine room simulator.
Skills. 1) Able to safely maintain watch in engine room. 2) Able to perform pumping operations. 3) Able to operate generators and control systems. 4) Able to operate ship's engineering systems, including command and control systems. 5) Able to operate the main engine and auxiliary machinery and relevant control systems.	Methods: performance of practical tasks using a simulator, test using CBT, final test. Evaluation criteria: the ability to independently practically apply the learned theory about ship machinery, equipment and systems in operation using the engine room simulator.
Competence. Able to demonstrate competence in accordance with the requirements of Section A-III/1 of the Code of the STCW Convention: 1) Maintaining a safe engine room watch. 2) To service the main engine and auxiliary machinery and the relevant control systems. 3) Maintenance of pumping systems and corresponding control systems. 4) To service generators and control systems. 5) Servicing of the ship's engineering systems, including command and control systems.	Methods: performance of practical tasks using a simulator, test using CBT, final test. Evaluation criteria: ability to independently demonstrate competence in accordance with the requirements of section A-III/1 of the Code of the STCW Convention. The ability to formulate, critically analyse and explain the adopted decisions and solutions.

Evaluation criteria of study results

Criterion	%
Performance of practical tasks using a simulator	30
Test using CBT	30
Final test	40

Total:	100
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Study subject structure

Part	CP	Hours			Tests		
		Lectures	Practical	Lab.	Test	Exam	Work
1.	3.0	0.0	0.0	0.0	*		