Discipline	MARINE DIESEL ENGINES-2 code: 38	2nd Semester Third Year
Specialty	MARINE ENGINEERING	
ECTS credits: 5	Form of assessment: EXAM	
Lecturer	Assoc. prof. Christo Pirovsky Room 402M Phone: +359 52 383 302 E-mail: .christo.pirovsky@tu-varna.bg	
Department	Department of Naval Architecture, Marine Engineering	
Faculty	Faculty of Shipbuilding	

Learning objectives:

/ANNOTATION/

The aim of the course is to introduce students to the processes in the operating cycle of marine diesel engines, fuel supply systems in classic and dual fuel engines, as well as quality of mixture formation and combustion in the engine cylinder.

In the laboratory classes the working regime and characteristics, methods for experimental research in diesel engine operational process are studied.

The syllabus is developed in accordance with the requirements of IMO Model Courses 7.04

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CONTENTS:

Ideal gas cycle

Chemical reactions. Combustion products

Heat engine cycle

Fuel pumps-jerk type pumps, valve-type pumps, common-rail injection system

Fuel injectors-classic injectors, unit injectors

Diesel engine fuel atomization and combustion

Dual fuel marine diesel engines

Total: 30 lectures and 15 exercises ECTS credits: 5