



Subject card

Subject name and code	Fuels, Oil and Greases, PG_00056068						
Field of study	Power Engineering						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2027/2028	
Education level	first-cycle studies	Subject group				Obligatory subject group in the field of study Subject group related to scientific research in the field of study	
Mode of study	Full-time studies	Mode of delivery				at the university	
Year of study	2	Language of instruction				English	
Semester of study	3	ECTS credits				1.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Division of Marine Power Plants -> Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Piotr Bzura					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		3.0		7.0	25
Subject objectives	Gaining knowledge about fuels, oils and greases by the student						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_K03] is able to react in emergency situations, threats to health and life when using energy devices, is aware of the impact of engineering activities on the environment		The student is aware of the impact of engineering activities on the environment			[SK5] Assessment of ability to solve problems that arise in practice	
	[K6_W06] knows classic and developmental energy technologies, rules for the selection and operation of heat and energy devices and installations, basic principles of energy systems operation, basic issues regarding the reliability of energy devices and diagnostics, environmental effects of energy technologies used, methods of using renewable energy sources		The student is able to explain the origin, describe the properties and characterizing indices, classify and present the operational issues of fuels, oils and greases			[SW2] Assessment of knowledge contained in presentation	
Subject contents	Course content – lecture Division and origin of fuels. Resources of fossil energy resources in Poland and in the world. Production and structure of fuel consumption. Main directions of crude oil processing. Classification and physical properties of gaseous and liquid fuels - natural gas, gasoline, kerosene, diesel oil, heating oil. Classification and characteristic indicators of solid fuels - hard coal, lignite, peat. Fuel contaminants and methods of their removal. Classification, characteristics and properties of lubricating oils and greases. Guidelines for the selection of lubricants.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade	
	Test		50.0%			100.0%	

Recommended reading	Basic literature	<p>1. 4. JAMES G. SPEIGHT: Handbook of Petroleum. Product Analysis</p> <p>2. Baczewski K., Kałdoński T.: Fuels for self-ignition engines. WKŁ, Warsaw 2008</p> <p>3. Baczewski K., Kałdoński T.: Fuels for spark-ignition engines. WKŁ, Warsaw 2008</p> <p>4. Podniato A.: Fuels, oils and lubricants in ecological operation. Guide. WNT, Warsaw, 2002.</p> <p>5. Urbański P.: Fuels and Lubricants. Gdansk 1997</p>
	Supplementary literature	Catalogs and brochures of producers of fuels, lubricating oils and technical devices
	eResources addresses	
Example issues/ example questions/ tasks being completed	<i>Measuring vapour pressure and propane-butane density</i>	
Practical activities within the subject	Not applicable	

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