GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Pipelines and auxiliary equipment of energy installations (WM), PG_00042086		
Field of study	Power Engineering, Power Engineering		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	English
Semester of study	6	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Zbigniew Kneba	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	15.0	30

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	30	5.0	65.0	100

Subject objectives

The aim is to familiarize students with pipeline systems in industry and municipal economy

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W14] has a theoretical knowledge in the field of chemistry, biology, physics and mathematics including knowledge necessary to understand the technological processes related to water treatment, wastewater treatment, waste management in energy facilities, circular economy		
[K6_U07] is able to use basic knowledge of fluid flow machines and methods related to their design in an analytical and numerical approach to the preliminary design of an energy installation		
[K6_U08] can design the basic parameters of the selected technology related to energy conversion and select auxiliary devices and evaluate the project in terms of technical and economic		
[K6_U14] can use properly selected methods and devices for hydraulics and hydrology, enabling determination of basic parameters characterizing the flow of medium in channels, pipelines and flow objects and can design installations, networks in the field of sanitary engineering		

Subject contents

Fluids in installations. Piping materials. Pipeline connections. Seals, fittings, Examples of combustion engine installations. Installation automation

Prerequisites and co-requisites

Fluid mechanics, thermodynamics

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	writen test	50.0%	100.0%
Recommended reading	Basic literature	Rivero Miguel G.: Pipelines Design Applications and Safety Nova Science Publishers 2012	
	Supplementary literature	Bai Yong: Pipelines and rises Elsievres	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Propose detachable connection for 3.0MPa 200C steam pipeline.Sketch a diagram of the city's gas supply system, marking the pressures in the pipelines		
Work placement	Not applicable		

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