



## Subject card

Subject name and code	Pipelines and auxiliary equipment of energy installations (WM), PG_00042086						
Field of study	Power Engineering, Power Engineering, Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
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_U05		Can calculate flow losses and balances of fluid flows in complex flow networks		[SU4] Assessment of ability to use methods and tools		
	K6_W06		He knows the rules of selecting fittings and accessories for pipelines from manufacturers' catalogs		[SW1] Assessment of factual knowledge		
	K6_U01		Uses the literature to calculate flow in pipelines		[SU2] Assessment of ability to analyse information		
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		
	written 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 Elsevier				
	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						