



Subject card

Subject name and code	Heat Turbomachinery, PG_00042103						
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		Optional subject group 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	3		Language of instruction		English		
Semester of study	5		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Energy and Industrial Apparatus -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Krzysztof Kosowski				
	Teachers		dr inż. Wojciech Włodarski				
			prof. dr hab. inż. Krzysztof Kosowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	0.0	0.0	45
	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	45		7.0		48.0	100
Subject objectives	Basic knowledge of turbomachinery principle of operation and turbomachinery energy power plants.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_W06		student is capable of: of selecting the main design parameters of turbine power plants, calculating cycles with steam and gas turbines, selecting the main design parameters of turbine stages, performing preliminary design calculations of turbine stages		[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
	K6_U04		student has knowledge about: - the main elements of turbine power plants,- theory of turbine stages, energy losses in turbine stage, efficiency characteristics, operation of multi-stage turbines		[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	Basics of thermodynamical cycles. Elements of turbine power plants. Fluid problems in turbomachinery. Theory of turbine stages. Turbine flow parts.						
Prerequisites and co-requisites	Basics of mechanics, fluid mechanics and thermodynamics.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Written exam		60.0%		100.0%		
Recommended reading	Basic literature		Perycz S., Turbiny parowe i gazowe, IMP Ossolineum,				
			Kosowski K. ed.,Steam and Gas Turbines, Alstom, ISBN 978-83-925959-3-9, 2007				
	Supplementary literature		-				

	eResources addresses	<p>Adresy na platformie eNauczenie:</p> <p>Heat Turbomachinery - Moodle ID: 26486 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26486</p> <p>Heat Turbomachinery - Moodle ID: 26486 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26486</p> <p>Heat Turbomachinery - Moodle ID: 26486 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26486</p>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	