



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