



Subject card

Subject name and code	Fluid-flow machinery, PG_00064858						
Field of study	Mechanical Engineering						
Date of commencement of studies	February 2025	Academic year of realisation of subject				2025/2026	
Education level	second-cycle studies	Subject group				Specialty 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	1	Language of instruction				English none	
Semester of study	2	ECTS credits				3.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Energy and Industrial Apparatus -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Jerzy Gluch					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	15.0	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	6.0		24.0	75	
Subject objectives	Basic knowledge of turbomachinery principle of operation and turbomachinery energy power plants.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_K12] is ready for fulfilling social commitment and initiation of actions for public interest including entrepreneurial thinking and acting	Student take into account social demands in his professional activity			[SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills		
	[K7_U13] evaluates the feasibility and potential for utilizing new technical and technological achievements in accomplishing tasks characteristic for the field of study	student can find modern energetical device fulfilling demands			[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	[K7_U04] creatively designs or modifies devices, processes or systems specific to Mechanics and Mechanical Engineering, using computer-aided design systems in the form of technical documentation, taking into account aspects of economic analysis, using appropriate tools and techniques	Student can design simple energetical device			[SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment		
	[K7_W03] demonstrates a well-structured and theoretically grounded knowledge of the key issues in Mechanical Engineering to enable the design and diagnosis of mechanical systems, processes and devices	Student can design simple mechanical and energetical devices			[SW1] Assessment of factual knowledge		
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%
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:	
Example issues/ example questions/ tasks being completed	descibe steam turbine principle of operation		
Work placement	Not applicable		

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