



## Subject card

Subject name and code	Research laboratory, PG_00057395						
Field of study	Mechanical Engineering						
Date of commencement of studies	February 2024		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group		Optional subject group		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Division of Fluid-Flow Machinery -> Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Krzysztof Kosowski				
	Teachers		prof. dr hab. inż. Krzysztof Kosowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	15.0	0.0	15
	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	15		2.0		8.0	25
Subject objectives	Students gain knowledge about principles of a research work (theoretical, numerical and experimental ones), methods of experiment planning, preparing of technical specification and presentation of results.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U03] is able to prepare construction, technological and operational documentation in compliance with appropriate standards, including technical drawings in CAD 2D and 3D systems		Students can prepare technical documentation (engineering specification) and use it in practical applications.		[SU1] Assessment of task fulfilment		
	[K7_U01] is able to acquire information from specialist literary sources and other sources regarding the construction and operation of machines and related disciplines in polish and in a foreign language, is able to conduct a self-learning process, is able to synthesize the information, form conclusions and justify opinions		Students can use databases, look for technical information and sythesize information.		[SU4] Assessment of ability to use methods and tools		
Subject contents	Problems of experiment planning, scientific research (experimental, theoretical, numerical), looking for technical information and presentation of results.						
Prerequisites and co-requisites	Lectures on turbomachinery						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	project execution		60.0%		100.0%		
Recommended reading	Basic literature		M. Korzyński, "Metodyka eksperymentu", WNT, 2006				
	Supplementary literature		be given by lecturer				
	eResources addresses		Adresy na platformie eNauczanie:				
Example issues/ example questions/ tasks being completed							

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