



## Subject card

Subject name and code	Research laboratory, PG_00064934						
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	Part-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	Zakład Maszyn Przepływowych -> 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						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	9.0	0.0	9
	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	9		3.0		13.0	25
Subject objectives	The main aim is to prepare students to research work (theoretical, design and experimental investigations), to give them basic principles of experimental design (planning), research methods and analysis of results, formulating conclusions and presentation of results						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U03] plans and carries out experimental investigations to determine the parameters of devices, processes or systems in the field of Mechanical Engineering and Mechanical Engineering, appropriately selects methods, techniques and tools, interprets results and estimates measurement errors		Student can explain the theoretical fundamentals of his example of a technical solution and experimental tests.		[SU1] Assessment of task fulfilment		
	[K7_W01] explains and describes, on the basis of general knowledge of the scientific disciplines forming the theoretical basis of Mechanics and Mechanical Engineering, the structure and principles of operation of mechanical systems and processes		Student can propose a simple technical solution (mechanical engineering type), design it, plan an experiment and perform tests.		[SW2] Assessment of knowledge contained in presentation		
	[K7_U14] integrates information obtained from literature and other properly selected sources, including those in a foreign language, creatively interpreting and critically evaluating them, and drawing conclusions		Student can discuss technical solutions (theoretical and used in practice), compare them to other examples, notice advantages and disadvantages.		[SU2] Assessment of ability to analyse information		
Subject contents	Problems of experimental investigations (theoretical, design and experimental investigations), to give them basic principles of experimental design (planning), research methods and analysis of results, formulating conclusions and presentation of results						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	report	60.0%	100.0%
Recommended reading	Basic literature	M. Korzyński, Metodyka eksperymentu, PWN WNT, wyd.2 , 2021 (in Polish)	
		Literature will be suggested by lecturer according to the particular tasks	
	Supplementary literature	Literature will be suggested by lecturer according to the particular tasks	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	1. Propose an experimental model of steam marine propulsion system.  2. Propose an experimental model of steam turbine.  3. Propose a method for rigid rotor balancing.		
Work placement	Not applicable		

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