



Subject card

Subject name and code	Research laboratory , PG_00057338						
Field of study	Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	February 2022	Academic year of realisation of subject				2022/2023	
Education level	second-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	1	Language of instruction				Polish	
Semester of study	2	ECTS credits				3.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Electrical Power Engineering -> Faculty of Electrical and Control Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Alicja Lenarczyk				
	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	30.0	0.0	30
	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	30		8.0		37.0	75
Subject objectives	The aim of the course is to develop students' ability to conduct scientific research, including: using scientific sources, the ability to solve problems through the means of appropriate analytical and simulation methods and experiments in scientific research, and to write research studies, to develop the ability to identify appropriate tools for a given research problem.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_K04] is able to react in emergency situations, health and life threatening when using power equipment	The student knows and understands the safety rules when working on solving a research problem.			[SK3] Assessment of ability to organize work		
	[K7_U01] is able to acquire information from literature, databases and other sources, has the ability of self-education in order to improve his/her professional competence (also in English), is able to prepare a simple scientific paper and its summary in English, as well as an oral presentation	The student knows and understands the rules of using information available in literature databases, standards and data sources, methods of quoting and searching for information.			[SU2] Assessment of ability to analyse information		
	[K7_U04] is able to plan and perform experiments using measurements and computer simulations, together with interpretation of results, is able to present and evaluate the course and results of work in a team realizing an advanced engineering project, is able to use technical documentation and to create it independently	The student is able to carry out the process of solving a research problem from the assumptions stage to the final stage - presenting the results and their presentation.			[SU5] Assessment of ability to present the results of task		
	[K7_K03] is able to think and act creatively and entrepreneurially, is aware of the responsibility for his/her own work and takes responsibility for teamwork	The student is able to correctly pose a research problem and present methods of its solution.			[SK1] Assessment of group work skills		
Subject contents	Design classes with the use of model programs available in student versions or under the University license. Research projects related to the operation of electricity and heat generation sources, transmission and distribution networks.						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Implementation of the project	60.0%	100.0%
Recommended reading	Basic literature	Blaxter L. et all, "How to research" Open University Press, 2010	
	Supplementary literature	Roberts P., Priest H. "Reliability and validity in research", Royal College of Nursing Publishing Company (RCN), 2006	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Has the research problem been correctly formulated?Have the appropriate tools been selected to solve the research problem?Are the results of the research problem presented in the correct way?		
Work placement	Not applicable		