



Subject card

Subject name and code	Auditing in Power Engineering, PG_00042202						
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			2023/2024		
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	4	Language of instruction			Polish		
Semester of study	7	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 hab. inż. Paweł Bućko					
	Teachers	dr hab. inż. Paweł Bućko					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	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		3.0		42.0	75
Subject objectives	Student achieves the qualifications of an energy auditor.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U05	The student is able to draw up an energy balance of the facility. Can properly conduct an energy audit of the facility. Can prepare energy audit reports.			[SU1] Assessment of task fulfilment		
	K6_W07	The student is able to keep an account of economic profitability in the scope of the implemented project. He is able to use current legal acts and is able to implement them in the project.			[SW3] Assessment of knowledge contained in written work and projects		
	K6_K03	The student is able to assess the environmental effect of the projects proposed as part of the audit.			[SK2] Assessment of progress of work		
Subject contents	Energy audit system. Role and aims of auditor work. Structure of energy audit and organization of its preparation. Organization of data collecting and analyzing processes. Data collection forms. Presentation of energy audits examples. Choosing of energy sources. Criteria of choose. Possibilities of energy source substitution. Calculation of investments costs. Complex analysis of energy conservation modernization program. Non-economic criteria for analysis of modernization effects. Environmental effects of energy conservation programs. Preparation of energy audit of the object. Estimation of energy consumption before the modernization. Proposal of energy conservation modernizations. Effectiveness analysis of implemented modernizations.						
Prerequisites and co-requisites	basis of thermal technic						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Project	60.0%			100.0%		
Recommended reading	Basic literature	1. Górzyński J.: Audyting energetyczny. Warszawa: Fundacja Poszanowania Energii 2002.					
	Supplementary literature	1. Robakiewicz M.: Ocena cech energetycznych budynków. Fundacja Poszanowania Energii 2005.					

	eResources addresses	Adresy na platformie eNauczenie: Audyting energetyczny [2023/24] - Moodle ID: 32257 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=32257
Example issues/ example questions/ tasks being completed	1. Calculation of seasonal energy demand for heating a building. 2. Calculation of energy demand for the hot water.	
Work placement	Not applicable	