



## Subject card

Subject name and code	Acoustics project, PG_00052642						
Field of study	Architecture						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study 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	3		Language of instruction		English		
Semester of study	5		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Technical Fundamentals of Architectural Design -> Faculty of Architecture						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Andrzej Kulowski				
	Teachers		prof. dr hab. inż. Andrzej Kulowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	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	To acquaint the student with the mechanism of sound and vibration transmission in building structures and the propagation of noise in the environment. Acquainting the student with the principles of anti-sound and anti-vibration protection of the building and the environment, as well as shaping the acoustics of rooms.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W01] knows and understands construction problems, building and engineering issues related to building design; principles, solutions, constructions and building materials used in simple engineering tasks in the field of architectural and urban design		The student has knowledge of the ways and mechanism of sound and vibration transmission in building structures and the propagation of noise in the field. The student knows the mechanism of sound propagation in rooms. of zerowaste architecture.		[SW1] Assessment of factual knowledge		
	[K6_U03] is able to prepare a graphic, written and oral presentation of your own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design		the object and learns the possibilities of influencing its acoustic properties.		[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	1. Familiarization with the operation of the SABINE computer program 2. Getting acquainted with the acoustic properties of building and finishing materials stored in the database 3. Case study: study of an exemplary room, execution of exemplary calculations 4. Selection of the room, development of the proportions and shape of the interior, the profile of the ceiling and walls, the layout of the auditorium, escape routes. 5. Development of the layout of finishing materials. Calculation of acoustic parameters taking into account design recommendations. 6. Preparation of a report on Acoustic guidelines for interior design.						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Study entitled Acoustic guidelines for the interior design of the auditorium	100.0%	100.0%
Recommended reading	Basic literature	1. Sadowski J.: Akustyka architektoniczna. PWN, Warszawa 1976 2. Kulowski A.: Akustyka sal - zalecenia projektowe dla architektów. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2011	
	Supplementary literature	1. Ciesielski, J. Kawecki, E. Maciąg: Ocena wpływu wibracji na budowie i ludzi w budynkach. Instytut Techniki Budowlanej, Warszawa 1993 2. Kulowski A.: Ćwiczenia projektowe z akustyki pomieszczeń z wykorzystaniem programu komputerowego "Sabine" (instrukcja laboratoryjna)	
	eResources addresses	Podstawowe <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25193">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25193</a> - Address of distance classes: Akustyka Architektoniczna 2021/22 - Moodle ID: 25193. Uzupełniające Adresy na platformie eNauczanie: Akustyka Architektoniczna 2023/24 - Moodle ID: 33208 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33208">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33208</a>	
Example issues/ example questions/ tasks being completed	Selection of the room to be developed from the list provided, determination of the shape and proportions of the room, selection and arrangement of finishing materials, preparation of the final study		
Work placement	Not applicable		

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