



Subject card

Subject name and code	Video and Audio Perception - Laboratory, PG_00048796						
Field of study	Electronics and Telecommunications						
Date of commencement of studies	February 2023		Academic year of realisation of subject		2023/2024		
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		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Multimedia Systems -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Piotr Ody				
	Teachers		dr inż. Piotr Ody mgr inż. Wanda Ludwikowska dr hab. inż. Józef Kotus				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	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		4.0		16.0	50
Subject objectives	The aim of the course is to familiarize students with the issues underlying the perception of sound and image, as well as methods of hearing and sight.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U02] can perform tasks related to the field of study as well as formulate and solve problems applying recent knowledge of physics and other areas of science		Student chooses a type of eye or hearing test depending on the needs. Student proposes new solutions for people with hearing and vision impairments.		[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information		
	K7_K02		The student analyzes the results and suggets ways to improve the used methods		[SK5] Assessment of ability to solve problems that arise in practice		
	[K7_U03] can design, according to required specifications, and make a complex device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment		The student conducts audiometric and optometric tests. The student assesses the stereoscopic vision. The student conducts tests in the field of visual and auditory correlation.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	[K7_U07] can apply advanced methods of process and function support, specific to the field of study		Student uses devices and software designed to conduct audiometric and optometric tests.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		

Subject contents	1. Introduction – Organizatory Meeting		
	2. Audiometric Tests – Air Conduction		
	3. Audiometric Tests – Bone Conduction		
	4. Free Field Audiometry		
	5. “I Can See...” - Computer-Based Eye Measurements		
	6. Loudness Scaling Tests		
	7. Testing Hearing Employing “I Can Hear...” System		
	8. Examination of Audio-Visual Correlation		
	9. Auditory Tests - Part I		
	10. Auditory Tests - Part II		
	11. Lateralization Tests		
	12. Vision Tests		
	13. Perception of stereoscopic vision		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical exercise	51.0%	100.0%
Recommended reading	Basic literature	Gelfand S.A., Essentials of Audiology, Theme, New York 1998. R. Gawroński, Bionika. System nerwowy jako układ sterowania, PWN, Warszawa, 1970. Chalupa L. M., Werner J. S., The Visual neurosciences, Chapter 87 Stereopsis (Schor C. M.), 1300-1312, The MIT Press, Cambridge, MA, 2004. Hojan E., Akustyka aparatów słuchowych, Wyd. Naukowe Uniwersytetu im. A. Mickiewicza, Poznań 1997. J. Renowski, Laboratorium akustyki psychofizjologicznej, skrypt, Wrocław, 1972. T. Bystrzanowska, Audiologia kliniczna, PZWL, Warszawa, 1973. Chalupa L. M., Werner J. S., The Visual Neurosciences, Chapter 86 The perceptual organization of depth (Fleming R., Anderson B. L), 1284-1299, The MIT Press, Cambridge, MA, 2004. J. Blauert, Raumliches Horen, Hirzel, Stuttgart, 1974. A. Czyżewski, B. Kostek, H. Skarżyński, Technika komputerowa w audiologii, foniatrii i logopedii, Akademicka Oficyna Wydawnicza, 2002. E. Walsh, Fizjologia układu nerwowego, PZWL, Warszawa, 1966. J.V. Tobias, Foundations of Modern Auditory Theory, Academic Press, New York, 1972. G.V. Bekesy, Experiments in Hearing, Mc Grow-Hill, New York, 1960.	
	Supplementary literature	No requirements	
		eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		