GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Recording Technology II, PG_00048330		
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	English
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Multimedia Systems -> Faculty of Electronics, Telecommunications and Informatics		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Bożena Kostek	
	Teachers	prof. dr hab. inż. Bożena Kostek dr inż. Bartłomiej Mróz dr inż. Karolina Marciniuk dr inż. Piotr Odya	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	15.0	45
	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	45	6.0	24.0	75

Subject objectives	The aim of the course is to familiarize students with the advanced issues of recording technology, teach them to combine knowledge of high-tech recording equipment with artistic skills at the recording studio (multitrack recording).

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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	Student is able to realize live recordings (student can use microphones and video mixer and setup cameras)	[SU4] Assessment of ability to use methods and tools
[K7_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of advanced technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Student is able to realize multi-track recordings and recordings in omni-directional systems.	[SU3] Assessment of ability to use knowledge gained from the subject
[K7_W03] Knows and understands, to an increased extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum.	Student is able to prepare mastering of a music file	[SW1] Assessment of factual knowledge
[K7_W05] Knows and understands, to an increased extent, methods of process and function support, specific to the field of study.	Student can use computer-based sound recordings and editing platform (track mixing, digital editing)	[SW1] Assessment of factual knowledge
[K7_U07] can apply advanced methods of process and function support, specific to the field of study	The student can professionally prepare audio-video production.	[SU2] Assessment of ability to analyse information

Subject contents

1. Introduction. References. 2. Microphone techniques, surround techniques. 3. Multichannel stereophonic recordings 4. Multichannel stereophonic systems 5. Multitrack recordings (acoustical climate selection, dynamic processing, equalization, delays and reverb setting) 6. Computer technique in a traditional sound recording studio (digital controlling, modern ideas of console automation, computer as a sound processor, overview of the newest solutions in computer multitrack recording and editing systems)l 7. Making the surround sound (sound sources setup, using mix-console) 8. Making of the surround sound (using computer equipped with multi-channel audiocard) 9. Computer-based sound recordings (track mixing, digital editing) 10. Music production based on MIDI (hardware and software sequencer, sequences editing and playback) 12. Live coverage (microphones and cameras setup, using video mixer) 13. Postsynchronization 14. Dubbing (equipment, creating principles) 15. Using Internet and ISDN in the recording studio 16. Test, final exam

Prerequisites and co-requisites

No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Practical exercise	50.0%	50.0%
Written exam	50.0%	50.0%

Recommended reading

Basic literature	K. Blair Benson, Sound Engineering Handbook, McGraw Hill, New York 1988; J. Eargle, Sound Recording, Van Nostrand, New York 1976. L. Hanzo, P. Cherriman, J. Streit, Video Compression and Communications, IEEE Press, 2007. S. Price, Digital Audio Editors, Studio Sound, March 1989. H.D. Miles, Audio Production Techniques for Video, H.W. Sams & Co. Indianapolis, IN, USA, 1989. P. May, Digital Video Handbook, A Comprehensive Guide to Making Videos that Make Money, RotoVision, 2004. H. Wyatt, T. Amyes, Audio Post Production for Television and Film, Focal Press, Amsterdam, 2005. J. Rose, Audio Postproduction for Digital Video, CMPBooks, San Francisco, 2002. T. Holman, Surround Sound Up and Running, Focal Press, Amsterdam, 2008. J. Watkinson, the Art of Digital Video, Focal Press, 2000.
Supplementary literature	No requirements
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Work placement

Not applicable