

DESCRIPTION OF THE COURSE OF STUDY

Course code	0719-2ID-F59_PM	
Name of the course in	Polish	Podstawy multimediiów
	English	Fundamentals of Multimedia

1. LOCATION OF THE COURSE OF STUDY within the system of studies

1.1. Field of study	Data Engineering
1.2. Mode of study	Full-time
1.3. Level of study	Undergraduate engineering study
1.4. Profile of study*	General academic
1.5. Person/s preparing the course description	Przemysław Ślusarczyk
1.6. Contact	pslusarczyk@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE course of study

2.1. Language of instruction	English
2.2. Prerequisites*	Introduction to programming Object Oriented Programming

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	lectures, laboratories, project	
3.2. Place of classes	Courses in the UJK teaching rooms of the Faculty of Exact and Natural Sciences	
3.3. Form of assessment	credit with grade (lectures, laboratories), credit without grade (project)	
3.4. Teaching methods	lectures- informative lectures laboratories, project - laboratory method (practical classes using Java development tools)	
3.5. Bibliography	Required reading	1. Ze-Nian Li, M.S. Drew, J. Liu, Fundamentals of Multimedia Third Edition, Springer 2021
	Further reading	1. R.C. Gonzales, R.E. Woods, Digital Image Processing, Pearson 2017.

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

4.1. Course objectives (including form of classes) Lecture: - C1. Gaining knowledge of sound and voice coding methods. - C2. Gaining knowledge of image and video coding methods. Laboratory + project - C3. Developing skills of selection a set of multimedia tools for the designed system.	
4.2. Detailed syllabus (including form of classes) Lecture: 1. Sound and image perception. 2. Fundamentals of sound compression. 3. Voice coding methods. 4. Lossless and lossy image compression methods 5. Video compression methods. 6. Standards of image and video compression. Laboratory: 1. Creating raster graphics. 2. Multimedia metadata processing. 3. Programming multimedia using HTML5 and JavaScript. 4. Programming multimedia applications using Python. Project: Students cooperates in groups to design and implement low complexity multimedia software.	

4.3. Intended learning outcomes

Code	A student, who passed the course	Relation to learning outcomes
within the scope of KNOWLEDGE:		
W01	has knowledge and understanding of sound and voice coding methods	ID1A_W11
W02	has knowledge and understanding of image and video coding methods	ID1A_W11
within the scope of ABILITIES:		
U01	can develop sound and voice coding schemes using dedicated development tools	ID1A_U06
U02	can develop image and video coding schemes using dedicated development tools	ID1A_U06
within the scope of SOCIAL COMPETENCE:		
K01	has competence to provide an expert knowledge related to multimedia processing.	ID1A_K03 ID1A_K04

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																	
	Oral answer			Reports			Project			Effort in class								
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes		
	L	C	P	L	C	P	L	C	P	L	C	P	L	C	P	L	C	P
W01		+	+		+						+							
W02		+	+		+						+							
W03		+	+		+						+							
U01		+	+		+				+		+							
U02		+	+		+				+		+							
U03		+	+		+				+		+							
K01		+	+		+				+		+							

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points
classes (C)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points
project (P)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points

5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

Category	Student's workload	
	Full-time studies	Extramural studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/		
Participation in lectures	30	
Participation in laboratories	30	
Project	15	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/		
Preparation for the laboratories	15	
Gathering materials for the project	35	
TOTAL NUMBER OF HOURS	125	
ECTS credits for the course of study	5	

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

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