

关。GDAŃSK UNIVERSITY 创 OF TECHNOLOGY

Subject card

Subject name and code	Mobile Multimedia Applications, PG_00048297							
Field of study	Informatics, Biomedical Engineering, Biomedical Engineering, Biomedical Engineering							
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 Geoinformatics -> Faculty of Electronics, Telecommunications and Informatics							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Marek Kulawiak					
	Teachers		dr inż. Marek Kulawiak					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	15.0		0.0	45
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	Participation in classes include plan	n didactic led in study	Participation in consultation hours		Self-study		SUM
	Number of study hours	45		4.0		1.0		50
Subject objectives	The goal of the subject is to familiarize the students with technologies applicable to mobile multimedia application development.							

Learning outcomes Course outcome		Subject outcome	Method of verification				
	[K7_W04] Knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices [K7_W03] Knows and	Student knows the methods of using web services in their own of applications.	[SW1] Assessment of factual knowledge				
	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.	satellite navigation system.	contained in presentation				
	[K7_U05] can plan and conduct experiments related to the field of study, including computer simulations and measurements; interpret obtained results and draw conclusions	The student is able to design and develop software using the technology and programming environments dedicated multimedia applications.	[SU4] Assessment of ability to use methods and tools				
	[K7_U11] can manage team work	Student is able to design a schedule of activities and assign tasks within the team.	[SU1] Assessment of task fulfilment				
	[K7_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, making assessment and critical analysis of the prepared software as well as a synthesis and creative interpretation of information presented with it	Student is able to utilize sensors build in a mobile device.	[SU3] Assessment of ability to use knowledge gained from the subject				
Subject contents	1. Augmented Reality in mobile devi	ces					
	3. Video processing on mobile devices.						
	4. Unity3D environment 5. Open GL ES						
Prerequisites and co-requisites	Object-oriented programming						
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	Project	50.0%	33.0%				
	Colloqium	50.0%	34.0%				
	Laboratory	50.0%	33.0%				
Recommended reading	Basic literature	A. Munshi, D. Ginsburg, D. Shreiner: OpenGL ES 2.0 Programming Guide, Addison-Wesley, 2010					
	Supplementary literature C. Morales, D. Nelson: Mobile 3D Game Development: From Start Market;Charles River Media, 2007						
	eResources addresses	Adresy na platformie eNauczanie: Mobilne aplikacje multimedialne 2023/2024 - Moodle ID: 30839 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30839					

Example issues/ example questions/ tasks being completed	What reference systems are used in mobile devices and computer graphics?
	Describe the basic compnents of a video game engine.
	Describe the coordinate systems applicable to augmented reality applications.
Work placement	Not applicable