

§ GDAŃSK UNIVERSITY § OF TECHNOLOGY

Subject card

Subject name and code	Digital Photogrametry, PG_00048301								
Field of study	Informatics								
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	2		Language of instruction			Polish			
Semester of study	3		ECTS credits			3.0	3.0		
Learning profile	general academic profile		Assessme	Assessment form			assessment		
Conducting unit	Department of Geoinformatics -> Faculty of Electronics, Telecommunications and Informatics								
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Marcin Ciecholewski						
	Teachers	dr hab. Marcin Ciecholewski							
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	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		6.0		39.0		75	
Subject objectives	The aim of the course The main emphasis i			-	-	-			

IV: V03) knows and understands, ban increased extent, the construction and operating principles of components and systems related to the field of duty, including theories, methods and complex agenceptate for the surriculum. The student knows stereoscopic vision models and was of components and systems related to find the student knows stereoscopic vision models and apply appropriate for the surriculum. ISU1] Assessment of factual methods and complex agenceptate for the surriculum. IV: Und can apply knowledge of programming methods and apply appropriate programming methods and tools in computer software development of study, making assessment and and creative interpretation of information presented with it [K7_W05] from and assist and creative interpretation of information presented with it [K7_W05] from and and creative interpretation of information presented with it [K7_W05] from apply store software. The student knows the ways to automate photogrammetry processing. [SW3] Assessment of knowledge contained in surface and creative interpretation of information presented with it [K7_W05] from apply advanced information presented with it	Learning outcomes	Course outcome	Subject outcome Mothod of verification						
subject contents indestation and operating principles of operating principles of principles of operating principles of operating princ	Learning outcomes		Subject outcome	Method of verification					
Image: Interpretent in the second and apply appropriate programming methods and tools in computer sources or programmable elements or systems specific to the field of study, making assessment and cortical analysis of the prepared and the second apply appropriate programmable elements or systems specific to the field of study, making assessment and cortical analysis of the prepared and the second apply appropriate programmable elements or systems specific to the field of study, making assessment and cortical analysis of the prepared and the second apply appropriate programmetry increases and the second appropriate programmetry increases and the second apply ap		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 -	models used in photogrammetry. The student knows stereoscopic vision models and ways of representing them, such as the						
Inderstands, to an increased extent, methods of process and function support, specific to the field of study. automate photogrammetry processing. contained in written work and projects Subject contents INTroduction to digital photogrammetry study. The student is able to use methods of process and function support, specific to the field of study. ISU4] Assessment of ability to use methods and tools Subject contents Introduction to digital photogrammetry overview of photogrammetric technology ISU4] Assessment of ability to use methods and tools Subject contents Introduction to digital photogrammetry software. ISU4] Assessment of ability to use methods and tools Subject contents Introduction to digital photogrammetry The geometry of the single-image - pinhole camera calibration Introduction to digital photogrammetry The geometry of the single-image - pinhole camera calibration Introduction single-image - pinhole camera calibration Principles of stereoscopic vision and stereoscopic observation. The geometry of the photogrammetry The geometry of the single-image - pinhole camera calibration Percentage of the final grad Collection of inages and automation of measurement - detectors and descriptors SIFT Estimation of homogrphy, fundamental matrix and criteria Subject passing criteria Passing threshold Percentage of the final grad Collection of laboratory tasks Recommended reading Basic literature 1. Krzysztof Brunicki; Materiały do wykładu z Fotogr		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	photogrammetric models and techniques during the development of proprietary						
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3D visualization of photogrammetric products									
Work placement Not applicable	Work placement								