

## GDAŃSK UNIVERSITY

## Subject card

Subject name and code	Basics of Robotics - laboratory, PG_00047592							
Field of study	Automatic Control, Cybernetics and Robotics							
Date of commencement of studies	October 2023		Academic year of realisation of subject			2025/2026		
Education level	first-cycle studies		Subject group			Obligatory subject group in the field of study		
						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	3		Language of instruction			Polish		
Semester of study	5		ECTS credits			1.0		
Learning profile	general academic profile		Assessment form			assessment		
Conducting unit	Department of Automatic Control -> Faculty of Electronics, Telecommunications and Informatics						ics	
Name and surname	Subject supervisor		dr inż. Piotr Fiertek					
of lecturer (lecturers)	Teachers		dr inż. Piotr F	dr inż. Piotr Fiertek				
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
of instruction	Number of study hours	0.0	0.0	15.0	0.0		0.0	15
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity Participation ir classes includ plan				Self-study SL		SUM	
	Number of study hours	of study 15		1.0		9.0		25
Subject objectives	Students do exercises related to issues described during the lecture: programming of industrial robots from Kawasaki (FA06E, RS03N) and Mitsubishi (RV-12SDL), getting acquainted with image processing algorithms.							
Learning outcomes	Course out	Course outcome Subject outcome			Method of verification			
	<ul> <li>[K6_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</li> <li>[K6_U05] can plan and conduct experiments related to the field of study, including computer simulations and measurements; interpret obtained results and draw conclusions</li> </ul>		The student got acquainted with the simulation environments and robot programming techniques of Kawasaki and Mitsubishi. The student learned to program robots from Kawasaki and Mitsubishi. The student learned the basic techniques of image processing. The student familiarized himself with the methodology of calibration of industrial robots. The student got acquainted with the method of robot communication with external devices. The student is able to conduct research and experiment in a simulation environment. He draws conclusions from the obtained results, repeats experiments until an acceptable result is obtained.			[SU1] Assessment of task fulfilment [SU1] Assessment of task fulfilment		

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