



Subject card

Subject name and code	Multiagent Environments, PG_00047892						
Field of study	Informatics						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2025/2026		
Education level	first-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	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Computer Architecture -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Mariusz Matuszek					
	Teachers	dr inż. Mariusz Matuszek					
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	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	2.0		18.0	50	
Subject objectives	Introduction to theory and practice of agent methodology in distributed systems.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_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 technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Student: - configures an agent environment - protects an agent environment against unauthorised access - implements and runs simple agent applications.			[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
	[K6_U11] can plan and organise individual and team work	Student: - performs an individual assignment - takes part in a group assignment			[SU1] Assessment of task fulfilment		
	[K6_W08] Knows and understands the fundamental dilemmas of modern civilisation and basic economic, legal and other conditions of various types of activities related to the field of study, including the basic concepts and principles in the field of industrial property and copyright protection.	Student: - knows and differentiates between agent architectures - is able to classify agent interaction methods.			[SW1] Assessment of factual knowledge		
Subject contents	1. Introduction to agent systems. 2. Agent and agent environment definitions. 3. Agent models and architectures. 4. BDI agent properties and principles of operation. 5. Agent interaction rules. 6. Multiagent systems properties. 7. Agents search algorithms. 8. Agent recommendation algorithms. 9. Agent negotiation algorithms. 10. Agent applications structure. 11. Agent application lifecycle. 12. Use of services in agent applications. 13. Agent development environments. 14. Agent runtime environments. 15. Agent application examples. 16. Tests and exams.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Practical exercise	50.0%	50.0%
	Midterm colloquium	50.0%	50.0%
Recommended reading	Basic literature	[1] Woolridge Michael: An Introduction to Multiagent Systems. [2] (Ed.) Weiss Gerhard: Multiagent Systems - A Modern Approach to Distributed Artificial Intelligence.	
	Supplementary literature	[1] JADE - Users Guide (*) [2] JADE - Administrator Guide (*) (*) literatura do części praktycznej przedmiotu / for exercises.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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