GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Multiagent Environments, PG_00047892		
Field of study	Informatics		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
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_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
[K6_U11] can plan and organise individual and team work	Student: - performs an indivdual assignment - takes part in a group assignment	[SU1] Assessment of task fulfilment
[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.	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment

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 recomendation 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
	Midterm colloquium	50.0%	50.0%
	Practical exercise	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		