



Subject card

Subject name and code	Agent systems, PG_00045385						
Field of study	Data Engineering						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2026/2027		
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			4.0		
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	0.0	15.0	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		64.0	100	
Subject objectives	The aim of the course is introduction to theory and practice of agent methodology in distributed systems.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
Subject contents	<ol style="list-style-type: none">1. Explanation of criteria to successfully complete the course2. Introduction to scope of the lecture and issues in multiagent systems3. Definitions of agent and agent environment4. Agent models and architectures5. BDI agent properties6. Rules of agent interactions7. Agent algorithm properties8. Agent search algorithms9. Agent recommendation algorithms10. Agent negotiation algorithms11. Agent application structure12. Lifecycle of agent application13. Using services in an agent application14. Agent development environments15. Agent runtime environments16. Examples of agent applications17. Tests and exams						
Prerequisites and co-requisites	A basic knowledge of the Java programming language, as well as command line access to Linux helps.						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	practical exercises	50.0%			50.0%		
	written test	50.0%			50.0%		
Recommended reading	Basic literature	1. Woolridge Michael: An Introduction to Multiagent Systems. 2. Weiss Gerhard (Ed.): Multiagent Systems - A Modern Approach to Distributed Artificial Intelligence.					
	Supplementary literature	1. JADE - Users Guide (*) 2. JADE - Administrator Guide (*)					
	(*) applies to hands-on exercises						

	eResources addresses	Adresy na platformie eNauczenie:
Example issues/ example questions/ tasks being completed	Implement a mobile agent with given functionality. Implement an agent service and publish it in the agent's environment. Describe the use of ontologies in agent environments.	
Work placement	Not applicable	

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