

NAME OF THE COURSE		Intelligent agents				
Code	PMII30	Year of study	GU-2			
Course teacher	prof.dr. sc. Marko Rosić	Credits (ECTS)	5,0			
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			30		30	
Status of the course	elective	Percentage of application of e-learning				
COURSE DESCRIPTION						
Course objectives	<p>This course aims to familiarize students with basic concepts associated with agent and intelligent agent technology. During the course, students will be given an overview of main topics related to intelligent agent technology such as the definition and characteristics of intelligent agent, agent architectures and their application, multi-agent system methodology and development.</p> <p>Students will participate in designing and developing a simple agent-based application using appropriate programming tools and languages.</p>					
Course enrolment requirements and entry competences required for the course	Basic programming skills and concepts.					
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>After completing the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Define a concept of Intelligent Agent and its main characteristics. 2. Recognize and describe different agent architectures. 3. Use agent-based systems for problem solving. 4. Describe and explain a concept of multi-agent system. 5. Specify different types of interactions between agents. 					
Course content broken down in detail by weekly class schedule (syllabus)	<ol style="list-style-type: none"> 1. Introduction to Agent and Multi-Agent Systems. (2h) 2. Agent Architectures. (2h) 3. Hybrid Agent Architectures. (2h) 4. Multi-Agent systems. (2h) 5. Collaboration & Coordination between agents. (2h) 6. Communication, Language & Protocols. (2h) 7. Project – topic selection (2h) 8. Agent Based Simulation. (2h) 9. Multi-Agent Interactions. (2h) 10. Negotiation strategies, Auctions. (2h) 11. Limited Resource Management. (2h) 12. Coalition forming. (2h) 13. Agent Development Methodologies. (2h) 14. Examples of Multi-Agent System application (2h) 15. Project presentation (2h). <p>Laboratory exercises match lecture topics and schedule.</p>					
Format of instruction	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input type="checkbox"/> exercises <input type="checkbox"/> on line in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work	<input checked="" type="checkbox"/> independent assignments <input type="checkbox"/> multimedia <input checked="" type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> homework assignments				
Student responsibilities	Lecture and laboratory attendance, active participation in course activities, homework and project realization, final exam.					

Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Name	Ects	Name	Ects	Name	Ects
	Class attendance	1	Research		Experimental work	
	Oral exam	2	Report		Homework assignments	
	Seminar essay		Essay			
	Tests		Practical training			
	Written exam	2	Project			
Grading and evaluating student work in class and at the final exam	Attendance/Participation (20%) Midterm / Project (40%) Final/Oral Exam (40%)					
Required literature (available in the library and via other media)	Title			Number of copies in the library	Availability via other media	
	Wooldridge, M (2001). An Introduction to Multiagent System. Wiley, NY.			0		
Optional literature (at the time of submission of study programme proposal)	Online Student material, including solutions to selected problems and additional reading					
Quality assurance methods that ensure the acquisition of exit competences	Student discussion, anonymous student evaluation questionnaire, student success rate, self-assessment					
Other (as the proposer wishes to add)						