NAME OF THE COURSE	Knowledge management in software development					
Code	PMID56	Year of study	GU-2			
Course teacher	izv. prof.dr. sc. Saša Mladenović	Credits (ECTS)	5,0			
Associate teachers		Type of instruction (number of hours)	L	S	E	F
			30		30	
Status of the course		Percentage of application of e-learning	25%			

COURSE DESCRIPTION	
Course objectives	The knowledge management in software development course introduces basic concepts of knowledge management and software engineering. Throughout the course subjects like knowledge representation, machine learning, reasoning, planning, searching the state space, user requirements, testing, maintenance and link between knowledge management and software engineering are discussed. Those mentioned above are used to build the knowledge base that will be evaluated on a real problem.
Course enrolment requirements and entry competences required for the course	
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. Analyzing and evaluating the impact of knowledge management on the organization 2. Describing the main components of the knowledge management solution 3. Implementing the appropriate tool for knowledge representation and management in the concrete domain ontology creation 4. Debating the basic usage of knowledge management in software engineering. 5. Explain the importance of reasoning, planning, organizing, human resources, leading, controlling in software development based on knowledge management. 6. Implementing basic machine learning methods in the analysis and design of knowledge-based systems. 7. Building the knowledge base using some of the data base management tool. 8. Building a prototype of a knowledge-based system using the appropriate programming language for problem-solving and the database.
Course content broken down in detail by weekly class schedule (syllabus)	1. The system and methods of scientific observation (2h) 2. Knowledge in the software development firms (2h) 3. Software as the final product (2h) 4. Ontologies (2h) 5. An informal approach to ontology building (2h) 6. Different approaches to software development (4h) 7. Manufacturing process actors and various product ontologies (2h) 8. Choosing the software modeling technique based on knowledge management (2h) 9. The layered engineering approach to software production (2h) 10. Multiagent paradigm and knowledge management (4h) 11. Implementation problems in knowledge management (2h) 12. Best practices examples (2h)

Format of instruction	☒ lectures ☐ seminars and workshops ☒ exercises ☐ on line in entirety ☐ partial e-learning ☐ field work	☒ independent assignments ☐ multimedia ☒ laboratory ☐ work with mentor ☐ 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	2	Research		Experimental work	
	Oral exam	0.5	Report		Homework assignments	
	Seminar essay		Essay			
	Tests	0.5	Practical training	0.5		
	Written exam	0.5	Project	1		

Grading and evaluating student work in class and at the final exam	

Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
		0	

Optional literature (at the time of submission of study programme proposal)	
Quality assurance methods that ensure the acquisition of exit competences	
Other (as the proposer wishes to add)	