

1.	Course Title	Software requirements analysis
2.	Code	F18L2S002
3.	Study program	Software engineering and information systems
4.	Study Program Organizer	Faculty of Computer Science and Engineering
5.	Degree (first, second, third cycle)	first cycle
6.	Academic year / semester 2 / summer / mandatory	7. ECTS credits 6
8.	Teacher	full professor Ljupcho Antovski, associate professor Gjorgji Madzharov, assistant professor Georgina Mircheva
9.	Course enrollment prerequisites	Објектно ориентирана анализа и дизајн или Софтверско инженерство
10.	Course program goals (competencies): After finishing this course, the student is expected to understand and have deepened knowledge in application of knowledge extraction from his client, to understand techniques for documenting software and business needs, to understand and have deepened knowledge in application of techniques for change management in software and business requirements.	
11.	Course program content: (1) Requirements definition (for example, product, project, restrictions, system boundaries, both external and internal) (1) Requirements engineering process (1) Layers/levels of requirements (for example, needs, goals, user requirements, system requirements and software requirements) (1) Characteristics of requirements (for example, testing, unambiguous, consistent, precise, traceable and priority) (1) Analysis of quality (nonfunctional) requirements (for example, reliability, security, usability and performance) (1) Software requirements in the context of system engineering (1) Evolution of requirements, tracing, priority, compromise analysis, risk analysis and influence analysis (1) Requirements management (for example, consistency management, release planning and reusability), Interaction between requirements and architecture (1) Requirements elicitation, sources of extraction (for example, stakeholders, domain experts, and operational and organizational environments), elicitation techniques (for example, interviews, questionnaires/surveys, prototypes, use cases, observation and participation techniques) (1) Requirements specification and documentation, requirements documentation basics (for example, types, purpose, structure, quality, attributes and standards) (1) Techniques for software requirement specification (for example, planning requirements documentation, decision tables, user stories and behavior specification) (1)	

	Requirements validation, desk-checks and inspections, prototyping for requirements verification (1) Design of acceptance test, product quality attributes confirmation, requirements interaction analysis (for example, functional interaction), Formal requirements analysis			
12.	Learning methods: Lectures using presentations, interactive lectures, exercises (using equipment and software packages), teamwork, case studies, invited guest lecturers, independent preparation and defense of a project assignment and seminar work.			
13.	Total available time	6 ECTS x 30 hours = 180 hours		
14.	Distribution of the available time	30 + 45 + 15 + 15 + 75 = 180 hours		
15.	Teaching activity forms	15.1.	Lectures – theoretical teaching	30 hours
		15.2.	Exercises (laboratory, auditory), seminar papers, teamwork	45 hours
16.	Other activity forms	16.1.	Project Tasks	15 hours
		16.2.	Independent Learning Tasks	15 hours
		16.3.	Home learning	75 hours
17.	Assessment methodology			
	17.1.	Tests	10 points	
	17.2.	Seminar paper/project (presentation: written and oral)	10 points	
	17.3.	Activity and learning	10 points	
	17.4.	Final exam	70 points	
18.	Assessment criteria (points/grade)	up to 50 points	5 (five) (F)	
		51 to 60 points	6 (six) (E)	
		61 to 70 points	7 (seven) (D)	
		71 to 80 points	8 (eight) (C)	
		81 to 90 points	9 (nine) (B)	
		91 to 100 points	10 (ten) (A)	
19.	Course completion and final exam requirements	Realized activities 15.1 and 15.2		
20.	Teaching Language	Macedonian and English		
21.	Teaching quality evaluation method	Internal evaluation mechanisms and questionnaires		

22.	Course Material				
22.1.	Mandatory course material				
	No	Author	Title	Publisher	Year
	1	Karl E. Wieggers, Joy Beatty	Software Requirements	Microsoft Press	2013
	2	Ian K. Bray	An Introduction to Requirements Engineering	Addison Wesley	2002
	3	Ian F. Alexander, Richard Stevens	Writing better requirements	Addison- Wesley	2002
	4				0
22.2.	Additional course material				
	No.	Author	Title	Publisher	Year