

1.	Course Title	Data mining		
2.	Code	F18L3S150		
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 3 / summer / mandatory	7. ECTS credits 6		
8.	Teacher	full professor Zhaneta Popeska		
9.	Course enrollment prerequisites	(Веројатност и статистика или Бизнис статистика) или Бази на податоци		
10.	Course program goals (competencies): . Introduction to methods for identifying valid, novel, useful, and understandable patterns in data. Data preprocessing Induction of predictive models from data: classification, regression, probability estimation. Discovery of clusters and association rules			
11.	Course program content: . Introduction. Data preprocessing. Performing data mining tasks: Classification, prediction, association analysis and clustering. Methods for analysis and comparison of knowledge discovering models. All algorithms will be applied to appropriately selected data sets.			
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 + 30 + 0 + 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	30 hours

		16.2.	Independent Learning Tasks	0 hours
		16.3.	Home learning	75 hours
17.	Assessment methodology			
	17.1.	Tests		10 points
	17.2.	Seminar paper/project (presentation: written and oral)		30 points
	17.3.	Activity and learning		10 points
	17.4.	Final exam		60 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	• Jiawei Han, Micheline Kamber	Data Mining: Concepts and Techniques
		2	• Pang-Ning Tan, Michael Steinbach, Vipin Kumar	Introduction to Data Mining
			Elsevier Inc.	2006
			Pearson Education Limited	2015
	22.2.	Additional course material		
		No.	Author	Title
			Publisher	Year

