1.	Course Title	Decision support systems
2.	Code	F18L3W156
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 4 / winter / mandatory	7. ECTS credits 6
8.	Teacher	assistant professor Georgina Mircheva
9.	Course enrollment prerequisites	Вештачка интелигенција или Вовед во науката за податоци
10.	Course program goals (competencies): This course is an introduction to the application of data analysis for making business decisions. The aim of the course is students to become familiar with the methods, techniques and decision support systems, as well as analysis of the decisions. To become familiar with the techniques for acquiring knowledge and representing knowledge. After completion of the course, students will gain knowledge of how to use decision support systems, how to properly choose an appropriate decision support system in a given business context, as well as to design, develop and manage decision support systems.	
11.	Course program content: Expert systems. Process of knowledge engineering. Knowledge representation. Knowledge discovery. Reasoning with uncertainty. Fuzzy logic. Decision making, systems, modeling and support. Decision support systems, concepts, methodologies and technologies. Modeling and analysis in decision making. Analysis of decisions. Applications for making business decisions in management, marketing, sales, customer relationship management, e-commerce, innovations, etc. Collaboration, communication, decision support systems for making decisions in a group. Knowledge management. Decision support systems for management, trends and influences. Tools and frameworks for development and design.	
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	Efraim Turban, Jay E. Aronson, Ting-Peng Liang, and Ramesh Sharda	Decision Support and Business Intelligence Systems, 9th edition	Prentice Hall	2011
	2	Vicki L. Sauter	Decision Support Systems for Business Intelligence, 2nd edition	John Wiley & Sons	2012
	3	George M. Marakas	Decision Support Systems, 2nd edition	Prentice Hall	2002
	4	Daniel J. Power	Decision Support Systems: Concepts and Resources for Managers	Greenwood Publishing Group	2002
	5	R. Sharda, D. Delen, E. Turban	Business Intelligence, A Managerial Perspective on Analytics, 3rd edition	Pearson	2013

22.2. Additional course material

No.	Author	Title	Publisher	Year