1.	Course Title	System administration
2.	Code	F18L3W060
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 / winter / optional	7. ECTS credits 6
8.	Teacher	full professor Panche Ribarski, associate professor Boro Jakimovski
9.	Course enrollment prerequisites	Оперативни системи
10.	Course program goals (competencies): System administration represents a complex process of operational management of system and software components in computer systems, in order to provide secure, reliable and available services to users. Organization of the process of system administration is diverse and includes activities relaed to management of operating systems, networking services as well as application and other server systems.	
11.	Course program content: (1) Management of users, files and software in computer systems in a client/server environment (MANAGEMENT) (2) Installation and configuration of network services for intranet and Internet domains (NETWORKING) (2) Administration of network security policies in Linux and Windows environment (SECURITY) (1) Techniques for interoperability of computer systems in mixed environment (INTEROPERABILITY) (2) Identification of possible sources of low performance and potential solutions (PERFORMANCE DEBUGGING) (1) Design of small and medium businesses IT infrastructures (CAPACITY PLANNING). (2) Development of scripting mechanisms and automation scripts for automation of complex administration tasks (SYSTEM SCRIPTING) (1) Evaluation of different policies and mechanisms for enabling reliable network services (BACKUPS) (1) Installation and configuration of Linux and Windows virtual machines (VIRTUALIZATION) (1) Systems for management of big data for large number of diverse users (DATA CENTRES)	
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	Thomas A. Limoncelli, Christina J. Hogan, Strata R. Chalup	The Practice of System and Network Administration, 3rd ed.	Addison-Wesley Professional	2016
2	Dennis Matotek, James Turnbull, Peter Lieverdink	Pro Linux System Administration: Learn to Build Systems for Your Business Using Free and Open Source Software, 2nd ed.	Apress	2017

22.2.	Additional course material			
	No.	Author	Title	Publisher	Year