1.	Course Title	Computer Components
2.	Code	F18L1S116
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 1 / summer / optional	7. ECTS credits 6
8.	Teacher	Ph.D. Andreja Naumoski, full professor Kosta Mitreski
9.	Course enrollment prerequisites	
10.	Course program goals (competencies): Knowledge of the structure of computer systems, hardware components, connection and the way of work, characteristics and standards used. http://www.eecs.harvard.edu/cs141/Site/Home.html, Hardvare University, USA http://www.doc.ic.ac.uk/~dfg/hardware/hardware.html, ImperialCollege London, Department of Computing, UK http://www.dejazzer.com/coen4710/doc/COEN4710_syllabus_2017.pdf, Marquette University, Dept. of Electrical and Computer Engineering https://openlab.citytech.cuny.edu/emt2370/syllabus/, NewYork CityCollege of Technology, USA	
11.	Course program content: Introduction to the structure of computer systems. Components of computer systems. Families on processors and motherboards. Chipset and trunk. Memory, input / output ports, enclosures. Internal input / output gates: controllers, serial ports, parallel ports, adapters. Mass storage media. Computer peripherals: pointing devices, keyboards, monitors, printers, scanners, digital cameras, modems, etc. Basic modes of use of software and software tools, working principles of popular software tools. Network devices. Characteristics of unmanaged and managed devices. Connectivity on various network devices. Installing and administering the operating system, connecting external devices and installation of drivers	
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	Ron White	How Computers Work: The Evolution of Technology, 10th Edition (How It Works) 10th Edition	Que Publishing;	2014
	2	Jean Andrews	A+ Guide to Hardware (Standalone Book) 9th Edition	Course Technology	2016
	3	Scott Mueller	Upgrading and Repairing PCs (22nd Edition)	Que Publishing	2015

22.2. Additional course material

No.	Author	Title	Publisher	Year