

1.	Course Title	Structural programming		
2.	Code	F18L1W020		
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 / winter / optional	7. ECTS credits 6		
8.	Teacher	full professor Dejan Gjorgjevikj, full professor Ana Madevska Bogdanova, associate professor Nevena Ackovska, associate professor Ivica Dimitrovski, associate professor Ivan Chorbev, associate professor Gjorgji Madzharov, assistant professor Hristina Mihajloska, assistant professor Mile Jovanov		
9.	Course enrollment prerequisites			
10.	<p>Course program goals (competencies): To introduce the students to the Structured programming paradigm, to understand the concept of algorithms and to enable them to develop algorithms, to code, test and compile programs. There will be introduction of data types, control structures, functions, arrays and files.</p>			
11.	<p>Course program content: Introduction, Programming languages and paradigms, Number representation, Structured programming concepts, Variables, Types of data and operations, Control structures, Algorithms, Functions, Recursion, Complex data structures – arrays, matrices, pointers. Files. Applications: programming language working environment.</p>			
12.	<p>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.</p>			
13.	Total available time	6 ECTS x 30 hours = 180 hours		
14.	Distribution of the available time	30 + 60 + 15 + 15 + 60 = 180 hours		
15.	Teaching activity forms	15.1.	Lectures – theoretical teaching	30 hours

		15.2.	Exercises (laboratory, auditory), seminar papers, teamwork	60 hours		
16.	Other activity forms	16.1.	Project Tasks	15 hours		
		16.2.	Independent Learning Tasks	15 hours		
		16.3.	Home learning	60 hours		
17.	Assessment methodology					
	17.1.	Tests		15 points		
	17.2.	Seminar paper/project (presentation: written and oral)		0 points		
	17.3.	Activity and learning		10 points		
	17.4.	Final exam		75 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	Kernighan B., Ritchie D.	The C Programming Language, 2nd edition	Prentice Hall	1988
		2	Deitel, Deitel,	How to program, C, 6th edition P	Prentice Hall	2010
		3	Steve Oullaine	Practical C, 3rd edition	O'Reilley	1997
		4	Peter Prinz, Tony Crawford	C in a Nutshell	O'Reilly	2005
	22.2.	Additional course material				
		No.	Author	Title	Publisher	Year

