1.	Course Title	Introduction to robotics	
2.	Code	F18L3W148	
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	associate professor Andrea Kulakov	
9.	Course enrollment prerequisites	Алгоритми и податочни структури	
10.	Course program goals (competencies): After finishing this course, the student is expected to have knowledge of development principles of robots and systems including sensors and effectors. Students will be introduced with methods of robot programming enabling their operation. Students will be introduced with application of robots in the industry and society.		
11.	Course program content: Introduction to robotics. Sensors in robotics. Effectors in robotics. Robot system kinematics and dynamics. Programming systems for operating with robots. Robot learning. Robots as intelligent agents. Autonomous robots. Application of robots in society, production processes, medicine.		
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	Maja Mataric	The Robotics Primer	MIT Press	2007
		2	Џон Џ. Крег	Вовед во роботика: Механика и контрола	АД Вербум	2010
	22.2.	Additional course material			
		No.	Author	Title	Publisher	Year