Computing – 3 semester

Lp.	Subject	Description	Semester	ECTS credits	Number of hours for the form of education						Form of passing	
					Lecture	Exercise	Practical classes	ZK	PS	PZ	Exam	Credit
1.	Foreign language		3	**4**	60	-	-				x	x
2.	Fiber optic systems	Learning the basic principles and technologies related to the implementation of fiber optic lines and networks, including computer networks. Acquiring basic skills in selecting fiber optic track elements. Learning measurement methods and acquiring the ability to assess the quality of the transmission system.	3	**3**	15	-	30				-	x
3.	Signals transmission theory	Expanding the student's knowledge of theory of signal transmission. Knowing the differences between analog and digital signal processing. Understanding the limitations of digital signal processing resulting from, among others, aliasing, spectrum leakage, and the problem of reproducibility of continuous signals from samples. Learning about various signal analysis tools in the time and frequency domain.	3	**3**	15	-	30				-	x
4.	Logic and set theory	Students acquire knowledge related to propositional calculus, predicate calculus and set theory. Students acquire logical reasoning skills in the	3	**2**	15	15	-				-	x

No.	Subject	Description											
		field of deduction used in programming in logic as a subfield of artificial intelligence.											
5.	Electronic measurement	Learning the principles of operation of selected electronic systems and diagrams of measurement systems used in electrical engineering and electronics. Development of skills in analyzing the parameters of current circuits.	3	3	30	30	-				5.	-	x
6.	Algorithms and data structures	To familiarize students with theoretical and practical problems related to algorithms and data structures. Developing the ability to use various algorithmic techniques and the ability to analyze the effectiveness of algorithms. Presentation of basic issues in the field of computational complexity theory.	3	3	30	-	30				6.	-	x
7.	Script programming	Students acquire knowledge and skills in using a scripting programming language, with an example Python 3, LUA and RUBY.	3	3	15	-	30					-	x
8.	Printed circuit design	Familiarization with the design and production process of printed circuits for large-scale integration systems. Presentation of standards standardizing the process of designing and manufacturing electronic devices. Presentation of design principles to reduce	3	3	15	15	15					-	x

No.	Subject	Description		ECTS								
		interference and ensure electromagnetic compatibility.										
9.	Operating systems	Presentation of the role, structure and principles of operation of operating systems. Overview of the basic mechanisms of the operating system. Familiarization with the basics of using the Linux operating system terminal and the ability to write BASH shell scripts.	3	4	30	-	30				x	x
10.	Digital technology	Presentation of information regarding the structure and operation of basic digital elements. Learning about theoretical and practical problems related to digital technology systems. Developing skills in designing sequential and combinational circuits.	3	5	30	30	30				x	x
	Total:			**33 ECTS**								