



Subject card

Subject name and code	Fundamentals of computing I, PG_00020963						
Field of study	Electrical Engineering						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Part-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Control Engineering -> Faculty of Electrical and Control Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Paweł Kowalski					
	Teachers	dr inż. Paweł Kowalski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	0.0	20.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=21248 Adresy na platformie eNauczanie:						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM		
	Number of study hours	30	3.0	67.0	100		
Subject objectives	Acquire the skills to write and run a program in C.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_K01	Student models simple electrical circuits in C language programs.			[SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills		
	K6_U01	The student is able to search for the source of information; properly apply knowledge to his/her own needs; verify the obtained results.			[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools		
	K6_W07	The student uses an integrated C programming environment. He uses appropriate data types in programs. Creates simple programs performing input / output operations. Applies program constructs of the C language in created programs. Creates the functions to which it passes parameters.			[SW1] Assessment of factual knowledge		
Subject contents	LECTURE Basics of computer architecture. Elements of C language: function main, constants, basic types (int, char, float, double), C operators (syntax rules, operation precedence), expressions in C, structured constructs (if, for, while, do while, goto, switch). Functions (definition, function call, parameter passing, returning values). LABS IDE of Code::Blocks, integer arithmetics, structured constructs of C, float-point arithmetics, single-index arrays, functions, characters and strings, bit arithmetics.						
Prerequisites and co-requisites	Information Technologies (04 21 10 00 04).						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	laboratory tasks	50.0%			60.0%		
	final test	50.0%			40.0%		

Recommended reading	Basic literature	<ul style="list-style-type: none"> • Drozdek A., Simon D. L.: Struktury danych w języku C, WNT, Warszawa • Kernighan B., Richie D. - Język ANSI C, Helion, Gliwice
	Supplementary literature	1. Wróblewski P. - Algorytmy, struktury danych i techniki programowania, Helion, Gliwice
	eResources addresses	
Example issues/ example questions/ tasks being completed	<p>Write a program in C language generating pięciokolumnową array containing four-digit values of trigonometric functions: sine, cosine, tangent and cotangent, for angles in the range $[0^\circ \div 90^\circ]$, the angle changes every five (5 minutes of arc).</p> <p>Write a program in C loading the legal parameters of date and time (year, month, day, hour, minute, second); program to calculate how many seconds have elapsed since the beginning of the year.</p> <p>Write a function, which will swap the pairs of numbers in an array of integers sent as a function parameter.</p> <p>Write a tic-tac-toe game</p>	
Work placement	Not applicable	