



## 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: <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=21248">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=21248</a> 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"> <li>Drozdek A., Simon D. L.: Struktury danych w języku C, WNT, Warszawa</li> <li>Kernighan B., Richie D. - Język ANSI C, Helion, Gliwice</li> </ul>
	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 <math>[0^\circ \div 90^\circ]</math>, 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	