GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Fundamentals of computing I, PG_00020963		
Field of study	Electrical Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2020/2021
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	e-learning
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: 30.0

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	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice
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	[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information
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. Algorithms (properties, examples, notation), computational complexity. 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 Dev—C++, simple program in C, 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
final test	50.0%	50.0%
homework	50.0%	50.0%

Recommended reading	Basic literature	1. Drozdek A., Simon D. L.: Struktury danych w języku C, WNT, Warszawa 2. 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	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 ° ÷ 90 °], the angle changes every five (5 minutes of arc). 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. Write a function, which will swap the pairs of numbers in an array of integers sent as a function parameter.	
Work placement	Not applicable	