GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Informatics I, PG_00038090
Field of study	Automation, Robotics and Control Systems

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	Full-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	Faculty of Electrical and Control Engineering

Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Robert Smyk
	Teachers	dr inż. Daniel Wachowiak dr inż. Robert Smyk

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	0.0	0.0	45
	E-learning hours included: 45.0						

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	45	10.0	45.0	100

Subject objectives	Getting to know the components and working of computers, including binary arithmetics ad different representations of numbers. Gaining entry-level experience in programming using the C language.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K6_W06	He knows the basic types in the C language. He knows the basic grammatical constructions of the C language. He understands the concept of a function, knows the structure of functions and methods of communication of a function with the environment, knows the basic standard functions.	[SW2] Assessment of knowledge contained in presentation
	K6_U04	He writes simple console applications in C language that perform input / output operations, using C language types, expressions using arithmetic and fire operators, conditional statements, loops, arrays and standard functions, creates and uses own functions.	[SU1] Assessment of task fulfilment

Subject contents	Internals and working of CPU, basics of C programming: basic program components, variables and constants, relational and boolean expressions, branch instrucion, loops, functions, passing parameters by value, return values, algorithm block diagrams, sorting algorithms, algorithm complexity assessmentaaa
Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Homeworks	60.0%	12.5%
	Assessment - practical	60.0%	37.5%
	Assessments - theory	60.0%	37.5%
	Preparation checks	60.0%	12.5%

Recommended reading	Basic literature	1. B. Kernighan, D. Ritchie, Język C, WNT 1988. 2. Niklaus Wirth, Algorytmy + struktury danych = programy, WNT 1989. 3. William Stallings, Computer Organization And Architecture. Designing for performance. 8th-edition.
	Supplementary literature	none
	eResources addresses	
Example issues/ example questions/ tasks being completed	Change the representation of numbers using the decimal, binary, hexadecimal and octal systems Enumerate the tasks of the operating system Explain the difference between recursive and iterative way of programming Describe the rules of algorithm complexity analysis Present the working of selected sorting algorithms Present the approaches to programming-in-the-large and the differences between these approaches Creating programs in C language, to perform give tasks and employ known programming techniques: - numerical programs - simple computer game - string processing	
Work placement	Not applicable	