

Subject card

Subject name and code	Introduction to Computer Programming, PG_00198454						
Field of study	Informatics						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2026/2027	
Education level	Bachelor's studies	Subject group				Obligatory subject group in the field of study	
Mode of study	full-time studies	Mode of delivery				at the university	
Year of study	1	Language of instruction				Polish	
Semester of study	1	ECTS credits				6.0	
Learning profile	academic	Assessment form				exam	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Janusz Dybizbański				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	60.0	0.0	0.0	90
	E-learning hours included: 0.0						
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	90		0.0		60.0	150
Subject objectives	The aim of the course is to learn basic programming techniques and acquire the skills to design, analyze and implement basic algorithms.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[INFOL3_U06] can select and apply appropriate methods and IT tools to solve complex problems						
	[INFOL3_W05] knows and understands advanced concepts in the field of various programming paradigms and programming languages; as well as object-oriented design and programming methods and patterns		can create computer programs and knows basic algorithm design techniques knows the recursion mechanism, basic algorithms, and data structures			[SW4] test/exam - oral or written [SW2] presentation/project/paper/report	
Subject contents	<ul style="list-style-type: none"> Algorithm and program. Simple programs in various ways of writing (verbal description, block diagram, programming language instructions). Manual simulation of the algorithm. Scheme of program processing in a high-level language - stages of compilation, consolidation and execution. Variable declarations. Simple data types and structural types: array, record. Scope of declaration and visibility of variables, global variables. Control instructions. The concept of partial and total program correctness. Nested loops. Procedures and functions. Ways to pass parameters to functions. Recursion mechanism and its use. Expressing a loop with recursion and an example of expressing recursion with a loop. Proving the correctness of recursive functions using mathematical induction. Representation of integers and floating-point numbers in the computer and the errors caused by them (over-range and rounding errors). The use of pointers and memory management on the example of simple data structures. Information about theoretical computational limits. 						
Prerequisites and co-requisites	no requirements						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	51.0%	20.0%
	activity in classes	0.0%	5.0%
	projects in class	51.0%	15.0%
	exam	51.0%	50.0%
	project	51.0%	10.0%
Recommended reading	Basic literature	[1] Griffiths David, Griffiths Dawn. <i>C. Ruzs głową!</i> Wydawnictwo Helion. [2] Szepietowski A. <i>Podstawy informatyki.</i> Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2000. [3] Kernighan B.W., Ritchie D.M. <i>Język ANSI C.</i> Wydawnictwa Naukowo-Techniczne, Warszawa 2003.	
	Supplementary literature	no applicable	
	eResources addresses		
Example issues/ example questions/ tasks being completed	no applicable		
Work placement	Not applicable		

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