

Subject card

Subject name and code	Introduction to computer programming, PG_00143541						
Field of study	Informatics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's 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		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		6.0		
Learning profile	academic		Assessment form				
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	45.0	0.0	0.0	75
	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	75		0.0		75.0	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		
	[INFL3_U02] can precisely formulate questions to deepen one's understanding of a given topic or find missing elements of reasoning		can find and correct errors in existing computer programs can assess and justify the optimality of solutions to simple problems		[SU2] presentation/project/paper/report [SU5] implementation of a problem task		
	[INFL3_W05] has general knowledge of various programming paradigms and programming languages; has detailed knowledge of 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		
	[INFL3_U06] is able to design, create, run and test programs using dedicated tools and adequate templates		can find and correct errors in existing computer programs can design simple algorithms, including those using DP and divide-and-conquer techniques		[SU2] presentation/project/paper/report [SU4] test/exam - oral or written [SU5] implementation of a problem task		

Subject contents	• 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
	activity in classes	0.0%	5.0%
	project	51.0%	10.0%
	projects in class	51.0%	15.0%
	test	51.0%	20.0%
	exam	51.0%	50.0%
Recommended reading	Basic literature	[1] Griffiths David, Griffiths Dawn. <i>C. Rusz 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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