



Subject card

Subject name and code	Informatics I, PG_00038090						
Field of study	Automation, Robotics and Control Systems						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
Education level	first-cycle studies	Subject group					
Mode of study	Full-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	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 dr inż. Paweł Kowalski					
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: 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	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] knows the structure of computers and microprocessors and the tasks of operating systems, has basic knowledge of the basics of computer software, drivers, microprocessor technology, design of simple algorithms and the operation of information networks	Can program the selected sorting or search algorithm.			[SW1] Assessment of factual knowledge		
	[K6_U04] has the ability to self-educate, among other things, in order to improve professional qualifications	Is able to solve programming tasks using loops and conditions.			[SU4] Assessment of ability to use methods and tools		
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 assessmenttaaa						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Assessments - theory	60.0%			37.5%		
	Homeworks	60.0%			12.5%		
	Assessment - practical	60.0%			37.5%		
	Preparation checks	60.0%			12.5%		

Recommended reading	Basic literature	<ol style="list-style-type: none"> 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	Adresy na platformie eNauczanie: INFORMATYKA I [2023/24] - Moodle ID: 36039 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36039
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	