



## Subject card

Subject name and code	, PG_00051066						
Field of study	Technical Physics						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
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			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Theoretical Physics and Quantum Information -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Patryk Jasik				
	Teachers		dr inż. Patryk Jasik				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 0.0 Adresy na platformie eNauczanie: Proceduralne Języki Programowania (2022) - Moodle ID: 20209 <a href="https://enauzanie.pg.edu.pl/moodle/course/view.php?id=20209">https://enauzanie.pg.edu.pl/moodle/course/view.php?id=20209</a>						
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	5.0	25.0	75		
Subject objectives	Student learns procedural programming in the selected programming language (e.g C language).						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U03	The student is able to program in C language.			[SU1] Assessment of task fulfilment		
	K6_W05	The student can write programs in the C language using appropriate libraries.			[SW3] Assessment of knowledge contained in written work and projects		
	K6_K01	The student understands the need to learn and get to know well-known technologies.			[SK2] Assessment of progress of work		
Subject contents	Lecture: Classification, similarities, and differences between programming languages. Introduction to programming in C language. Programming technique using procedural programming languages. Classification and description of the basic libraries used in programming in C. Discussion of the lexical units occurring in C. Classification and description of the main control blocks in C. Discussion of the syntax and mode of action: functions, tables, and pointers. Description of the preprocessor and its fundamental directives. Classification and description of operations on files. Action on strings. Discussion of the structure, union, and bit-fields.  Exercises in the computer laboratory: the lecture contents are realized in the practical examples.						
Prerequisites and co-requisites	Basic knowledge of operating systems Unix / Linux and MS Windows.						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Two tests of the practical skills of programming	50.0%			50.0%		
	A written knowledge test of the lecture	50.0%			25.0%		
	Five very short tests of the practical skills of programming	50.0%			25.0%		

Recommended reading	Basic literature	B.W. Kernighan, D.M. Ritchie, „C Programming Language”, Prentice Hall C.L. Tondo, S.E. Gimpel, „The C Answer Book: Solutions to the Exercises in “The C Programming Language”, Prentice Hall I. Sommerville, „Software Engineering”, Addison Wesley "C Programming", from Wikibooks, the open-content textbooks collection
	Supplementary literature	N. Wirth, „Algorithms + Data Structures = Programs”, Prentice Hall S. Prata, „C Primer Plus”, Sams S. Oaulline, „Practical C Programming”, O'Reilly Media
	eResources addresses	Proceduralne Języki Programowania (2022) - Moodle ID: 20209 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20209">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20209</a>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	