



## Subject card

Subject name and code	High Level Programming Languages - project, PG_00048069						
Field of study	Electronics and Telecommunications						
Date of commencement of studies	October 2023	Academic year of realisation of subject				2025/2026	
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	3	Language of instruction				Polish	
Semester of study	5	ECTS credits				1.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Biomedical Engineering -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Magdalena Mazur-Milecka				
	Teachers		dr inż. Magdalena Mazur-Milecka				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	15.0	0.0	15
	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	15		1.0		9.0	25
Subject objectives	The aim of the course is to familiarize students with selected high-level programming languages, as a development of the already gained programming knowledge and skills. An important objective is to show the similarities between the languages of the same class so that the student can easily learn a new programming language based on the well-known, previously learned programming language.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study		The student is able to write programs in Java and C#, implement algorithms, create and use class libraries, create a graphical interface of the program using dedicated programming tools.			[SU1] Assessment of task fulfilment	
	[K6_W04] knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices		The student knows the principles and rules of object-oriented programming. Knows and understands the paradigms (OOP) and techniques used in object-oriented programming.			[SW1] Assessment of factual knowledge	
Subject contents	1. Introduction to high-level languages. 2. Java language - basics, code construction, 3. Java language: identifiers and variables, data types, operators 4. Introduction to object modeling 5. Classes and constructors 6. Inheritance 7. Encapsulation and Polymorphism 8. Exception handling, arrays and collections 9. Abstract classes and interfaces 10. Introduction to graphics 11. Graphics: components and containers 12. Event handling 13. I/O operations 14. C# basics 15. C# basics.						
Prerequisites and co-requisites	No requirements						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory exercises	51.0%	60.0%
	Lecture - tests	50.0%	40.0%
Recommended reading	Basic literature	Sun:Language Specification, Sierra Kathy, Bates, Bert Gee Trisha, Java. Head first!, 2023, Andrew Stellman, Jennifer Greene, C#. Head first!, 2022	
	Supplementary literature	No requirements	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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