GDAŃSK UNIVERSITY OF TECHNOLOGY

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 2026	Academic year of realisation of subject	2027/2028
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	2	Language of instruction	Polish
Semester of study	4	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Biomedical Engineering -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Magdalena Mazur-Milecka	
	Teachers	dr inż. Magdalena Mazur-Milecka	

Lesson types

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

Course content – project
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.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">No requirements</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Laboratory exercises</td><td>51.0%</td><td>60.0%</td></tr>
<tr><td>Lecture - tests</td><td>50.0%</td><td>40.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Sun:Language Specification, Sierra Kathy, Bates, Bert Gee Trisha, Java. Head first!, 2023, Andrew Stellman, Jennifer Greene, C#. Head first!, 2022</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">No requirements</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3"></td></tr>
<tr><td>Practical activites within the subject</td><td colspan="3">Not applicable</td></tr>
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