



## Subject card

Subject name and code	Object-Oriented Programming, PG_00047644						
Field of study	Informatics						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
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			4.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Geoinformatics -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marek Moszyński					
	Teachers	dr hab. Marcin Ciecholewski dr hab. inż. Marek Moszyński mgr inż. Tomasz Bieliński dr inż. Andrzej Chybicki					
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	10.0	30.0	0.0	55
	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	55		10.0		35.0	100
Subject objectives	Theory and practice on object oriented programming						
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 acquires practical skills by performing laboratory tasks in specific object-oriented programming languages			[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 gets acquainted with the basics of object-oriented programming on the example of four object-oriented programming languages			[SW1] Assessment of factual knowledge		

Subject contents	<p>Course content – lecture</p> <ol style="list-style-type: none"> <li>1. Software programming paradigms including object oriented approach</li> <li>2. Encapsulation, inheritance, abstraction and polymorphism in C++ language</li> <li>3. Specific features of C++ object-orientation</li> <li>4. Java language and its comparison to C++ language</li> <li>5. C# language as successor of C++ and Java languages</li> <li>6. Python as a scripting object oriented language</li> </ol>														
Prerequisites and co-requisites	Knowledge on non-object oriented language i.e. C language.														
Assessment methods and criteria	<table border="1" data-bbox="448 647 1477 786"> <thead> <tr> <th data-bbox="448 647 794 678">Subject passing criteria</th> <th data-bbox="794 647 1141 678">Passing threshold</th> <th data-bbox="1141 647 1477 678">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 678 794 710">lecture</td> <td data-bbox="794 678 1141 710">60.0%</td> <td data-bbox="1141 678 1477 710">34.0%</td> </tr> <tr> <td data-bbox="448 710 794 741">project</td> <td data-bbox="794 710 1141 741">60.0%</td> <td data-bbox="1141 710 1477 741">33.0%</td> </tr> <tr> <td data-bbox="448 741 794 786">laboratory</td> <td data-bbox="794 741 1141 786">60.0%</td> <td data-bbox="1141 741 1477 786">33.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	lecture	60.0%	34.0%	project	60.0%	33.0%	laboratory	60.0%	33.0%
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Recommended reading	<p>Basic literature</p> <p>Supplementary literature</p> <p>eResources addresses</p>	<p>Bjarne Stroustrup - The C++ programming language</p> <p>Bruce Eckel - Thinking in Java</p> <p>Andy Harris - Microsoft C# for absolute beginner</p> <p>Mark Lutz - Programming Python</p> <p>John Hunt - Smalltalk and Object Orientation</p>													
Example issues/ example questions/ tasks being completed	<p>Sample question: What are the trends of C++ evolution?</p> <p>Sample task: implementation of simple object oriented software module using object oriented paradigms in different languages</p>														
Practical activities within the subject	Not applicable														

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