

GDAŃSK UNIVERSITY

Subject card

Subject name and code	Object-oriented Programming Languages, PG_00047824								
Field of study	Informatics								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2021/2022			
Education level	first-cycle studies		Subject group			Optional subject group			
Mode of study	Part-time studies		Mode of delivery			at the university			
Year of study	2		Language of instruction			Polish			
Semester of study	3		ECTS credits			6.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Geoinformatics -> Faculty of Electronics, Telecommunications and Informatics								
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Marek Moszyński						
	Teachers		dr hab. inż. Marek Moszyński						
			dr inż. Andrzej Chybicki						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	30.0	0.0	0.0	15.0		0.0	45	
	E-learning hours included: 0.0								
	Adresy na platformie eNauczanie:								
	Języki programowania obiektowego 2021 - Moodle ID: 19456 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=19456								
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		15.0		90.0		150	
Subject objectives	Theory and practice of	Theory and practice on object oriented programming							

Learning outcomes	Course outcome	Subject outcome	Method of verification				
	[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				
	[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_U41] can produce, test or evaluate software using modern programming platforms, tools, languages and paradigms of different levels, as well as use software packages supporting scientific and research processes as well as business decision- making processes and teamwork	The student acquires practical skills by performing sample tasks in several object-oriented programming languages	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment				
Subject contents	 Programming paradigms with particular emphasis on the object-oriented paradigm Implementation of encapsulation, inheritance, abstraction and polymorphism in C++ Specificity of object-oriented implementation in C++ Java language and its comparison with the C++ language The C# language and as the successor to the C language and comparison with the Java language Python as a representative of script-oriented object-oriented programming languages 						
Prerequisites and co-requisites	No requirements						
Assessment methods	Subject passing criteria	Bassing threshold	Percentage of the final grade				
and criteria	Broject passing citiena						
	Middama colleguium	55.0%					
		55.0%	40.0%				
Recommended reading	Basic literature	 Bjarne Stroustrup, The C++ Programming Language Bruce Eckel, Thinking in Java Andy Harris, Microsoft C# for absolute beginner Mark Lutz, Programming Python John Hunt, Smalltalk and Object Orientation 2, Bruce Eckel, Thinking 					
	Supplementary literature 1. John Hunt, Smalltalk and Object Orientation 2. Bruce Eckel, in C++						
	eResources addresses	Języki programowania obiektowego 2021 - Moodle ID: 19456 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=19456					
Example issues/ example questions/ tasks being completed	Sample question: In what direction is C++ developing? Sample task: Implementation of a simple object-oriented program using object-oriented programming paradigms in various programming languages.						
Work placement	Not applicable						