GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Object-oriented Programming, PG_00047644		
Field of study	Informatics		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2020/2021
Education level	first-cycle studies	Subject group	Obligatory subject group 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		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marek Moszyński	
	Teachers	dr hab. inż. Marek Moszyński dr hab. inż. Marcin Kulawiak dr inż. Marek Kulawiak dr inż. Andrzej Chybicki mgr inż. Tomasz Bieliński mgr inż. Krzysztof Drypczewski mgr inż. Tomasz Idzi dr inż. Paweł Sosnowski	

Lesson types and methods of instruction	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						
	Adresy na platformie eNauczanie: Programowanie Obiektowe - Moodle ID: 12691 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=12691						

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_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.	[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
[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

Subject contents

1. Software programming paradigms including object oriented approach

2. Encapsulation, inheritance, abstraction and polymorphism in C++ language

3. Specific features of C++ obiect-orientation

4. Java language and its comparison to C++ language

5. C# language as succesor of C++ and Java languages

6. Python as a scripting object oriented languge

Prerequisites and co-requisites

Knowledge on non-object oriented language i.e. C language.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
project	50.0%	33.0%
laboratory	50.0%	33.0%
lecture	50.0%	34.0%

Recommended reading

Basic literature	Bjarne Strastroup - The C++ programming language Bruce Eckel - Thinking in Java Andy Harris - Macrosoft C# for absolute beginner Mark Lutz - Programming Python
Supplementary literature	John Hunt - Smalltalk and Object Orientation
eResources addresses	Programowanie Obiektowe - Moodle ID: 12691 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=12691

Example issues/ example questions/ tasks being completed	Sample question: What are the trends of C++ evolution? Sample task: implementation of simple object oriented software module using object oriented paradigms in different languages
Work placement	Not applicable