GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Object programming, PG_00045295
Field of study	Data Engineering

Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
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	3.0
Learning profile	general academic profile	Assessment form	exam

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	mgr inż. Tomasz Idzi
		dr hab. inż. Marek Moszyński
		mgr inż. Tomasz Bieliński

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	11.0	30.0	0.0	56
	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	56	6.0	13.0	75

Subject objectives	Theory and practice on object oriented programming

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U01] programs in procedural, object, functional and logic programming languages, codes programs at the processor instruction level, runs and tests programs.	The practical skills are verified by programming using a few object oriented languages	[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools
	[K6_W05] Knows and understands programming models and evolution of related languages. Knows the methods of analysing and designing information systems and the modeling languages used in them, as well as the basic object-oriented programming platforms.	The lectures give the idea of object oriented programming with the four different programming languages i.e. C++, Java, C# and Python.	[SW1] Assessment of factual knowledge

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
	laboratory	60.0%	33.0%
	project	60.0%	33.0%
	lecture	60.0%	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	Adresy na platformie eNauczanie: Object Programming 2023 - Moodle ID: 25828 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25828

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

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