

Subject card

Subject name and code	Design Patterns, PG_00168146						
Field of study	Informatics						
Date of commencement of studies	October 2024		Academic year of realisation of subject			2024/2025	
Education level	Master's studies		Subject group			Obligatory subject group in the field of study Optional subject group	
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			6.0	
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Tomasz Borzyszkowski				
	Teachers		dr Tomasz Borzyszkowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	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	60		0.0		0.0	60
Subject objectives	The subject is intended to provide students with an overview of the most commonly used design patterns related to object-oriented programming.As part of the course, students will learn the practical use of selected design patterns to solve typical programming problems.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[INFMU2_K03] is able and ready to formulate opinions on basic IT issues		The student is aware of the dynamics of technological development and understands the need for further learning. The student is able to form opinions on the application of basic programming constructs.			[SK2] presentation/project/paper/report	
	[INFMU2_U02] is able to formulate questions with precision, serving to deepen his/her own reasoning on a given topic or to find missing elements of reasoning		The student is able to solve programming problems using design patterns.			[SU2] presentation/project/paper/report	
	[INFMU2_W03] has in-depth knowledge of programming paradigms and advanced programming constructs; knows current trends in programming languages		The student knows the basic design patterns.			[SW2] presentation/project/paper/report	

Subject contents	1. The history behind design patterns 2. Overview of structural design patterns 3. Overview of structural design patterns 4. An overview of behavioural design patterns 5. Selected architectural patterns		
Prerequisites and co-requisites	Familiarity with the basics of object-oriented programming in the student's chosen languages.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Presentation of the student's own projects	50.0%	100.0%
Recommended reading	Basic literature	1. Gamma E., Helm R., Johnson R., Vlissides J. Wzorce projektowe. Elementy oprogramowania obiektowego wielokrotnego użytku.2. Freeman E&E, Bates B., Sierra K. Rusz głową ! Wzorce projektowe.	
	Supplementary literature	Adrian Ostrowski, Piotr Gaczowski, Architektura oprogramowania bez tajemnic. Wykorzystaj język C++ do tworzenia wydajnych aplikacji i systemów, Helion 2022.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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