



Subject card

Subject name and code	Applied software - team project, PG_00037523						
Field of study	Oprogramowanie aplikacyjne - projekt zespołowy						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Optional subject group 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	4		Language of instruction		Polish		
Semester of study	7		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Physics and Applied Computer Science -> Faculty of Applied Physics and Mathematics -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Marta Łabuda				
	Teachers		dr hab. inż. Marta Łabuda				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	60.0	0.0	75
	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	75		10.0		15.0	100
Subject objectives	Knowledge about software implementation, testing, deployment and product service.To acquaint the student with the dangers of groupware, and with some collaboration tools. To acquaint thestudent with the concept of software quality and techniques of assurance this quality.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_K04		The student knows project management software and tools.		[SK1] Ocena umiejętności pracy w grupie		
	K6_W05		The student knows the threats resulting from the group work and knows the project management tools used for organization of the group work. The student knows the software quality specification. Student knows quality assurance techniques		[SW1] Ocena wiedzy faktograficznej		
	K6_K05		The student is able to present his or her project.		[SK4] Ocena umiejętności komunikacji, w tym poprawności językowej		
	K6_U03		The student is able to use the selected programming technology in his or her project		[SU1] Ocena realizacji zadania		
	K6_U02		The student is able to analyze the problem and solve it		[SU4] Ocena umiejętności korzystania z metod i narzędzi		
	K6_U01		The student is able to independently obtain information from the given sources		[SU1] Ocena realizacji zadania		

Subject contents	Course content – lecture The lecture is to extend the course of software engineering, with particular emphasis on the principles of group work, testing methods and quality control software, and selected modern programming techniques. 1. Groupthink, 2. Software Configuration Management, 3. Design patterns with particular emphasis on MVC, 4. Software Quality 5. Quality Control Software 6. Cost of software quality 7. Introduction to software testing 8. Methods for testing scientific software 9. Exploratory Testing 10. Axioms in software testing 11. Automation testing 12. Automated testing in practice - the collection of JUnit 13. Programming controlled tests		
	Course content – project Students are pursuing (worked in small groups) selected IT projects on the basis of the documentation prepared from the prototyping stage to implementation, testing and implementation of the finished product. 1. Prototype 2. Inspection of the prototype 3. Proper implementation of the project 4. Code Inspection 5. Application Testing 6. Implementation and acceptance of the project. Final presentation.		
Prerequisites and co-requisites	Ability to make an object-oriented programming; Knowledge of software engineering		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Reports	50.0%	10.0%
	Project	50.0%	90.0%

Recommended reading	Basic literature	R. Patton: Testowanie oprogramowania, Mikom, Warszawa, 2002l. Sommerville: Inżynieria oprogramowania, WNT 2003 J. Górski (red.), Inżynieria oprogramowania w projekcie informatycznym, MIKOM 2000
	Supplementary literature	List of the accessible homepages of the selected by students IT technologies in which the group project is prepared.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Project schedule Reports of the work development Implementation of the project Testing	
Practical activities within the subject	Not applicable	

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