GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Applied software - team project, PG_00037523		
Field of study	Technical Physics		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2024/2025
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	Division of Theoretical Physics and Quantum Informaton -> Institute of Physics and Applied Computer Science -> Faculty of Applied Physics and Mathematics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marta Łabuda	
	Teachers	dr hab. inż. Marta Łabuda	

Lesson types and methods of instruction

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, deployement 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_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] Assessment of factual knowledge
K6_U01	The student is able to independently obtain information from the given sources.	[SU1] Assessment of task fulfilment
K6_K04	The student knows project management software and tools.	[SK1] Assessment of group work skills
K6_U03	The student is able to use the selected programming technology in his or her project.	[SU1] Assessment of task fulfilment
K6_K05	The student is able to present his or her project.	[SK4] Assessment of communication skills, including language correctness
K6_U02	The student is able to analyze the problem and solve it.	[SU4] Assessment of ability to use methods and tools

<table>
<tr><td>Subject contents</td><td>LECTURE

The lecture is to extend the course of software engineering, with particular emphasis on the principles ofgroup work, testing methods and quality control software, and selected modern programming techniques:

1. Groupthink

2. Software Configuration Management

3. Tools for the IT project Management

4. Software Quality, Quality Control of Software. Cost of software quality

5. Introduction to software testing

6. Methods for testing scientific software

7. Exploratory Testing

8. Axioms in software testing

9. Automation testing

10. Automated testing in practice. Programming controlled tests 1

LABORATORY Students are pursuing (worked in small groups) selected IT projects on the basis of the documentation preparedfrom the prototyping stage to implementation, testing and implementation of the finished product. 1stPrototype 2nd Inspection of the prototype 3rd Proper implementation of the project 4th Code Inspection 5thApplication Testing 6th Implementation and acceptance</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Ability to make an object-oriented programming; Knowledge of software engineering</td></tr>
<tr><td>Assessment methods and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Reports</td><td>50.0%</td><td>10.0%</td></tr>
<tr><td>Project</td><td>50.0%</td><td>90.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>R. Patton: Testowanie oprogramowania, Mikom, Warszawa, 2002I. Sommerville: Inżynieria oprogramowania, WNT 2003J. Górski (red.), Inżynieria oprogramowania w projekcie informatycznym, MIKOM 2000</td></tr>
<tr><td>Supplementary literature</td><td>List of the accessible homepages of the selected by students IT technologies in which the group project is prepared.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:
Oprogramowanie aplikacyjne 2024 - Moodle ID: 27078
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=27078</td></tr>
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Example issues/ example questions/ tasks being completed	Project schedule Reports of the work development Implementation of the IT project Testing
Work placement	Not applicable

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