GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Quality of Information Systems, PG_00047714		
Field of study	Informatics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	second-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	Part-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	6.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Computer Architecture -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Jarosław Kuchta	
	Teachers	dr inż. Jarosław Kuchta prof. dr hab. inż. Bogdan Wiszniewski	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	18.0	0.0	15.0	0.0	0.0	33

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	33	10.0	107.0	150

Subject objectives

Know how to evaluate software quality and how to manage the quality in the software enterprise.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of advanced technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	He can indicate deficiencies and defects in the submitted IT project documentation and ways to solve them	[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
[K7_K02] is ready to provide critical evaluation of received content and to acknowledge the importance of knowledge in solving cognitive and practical problems	Is able to critically evaluate user requirements	[SK2] Assessment of progress of work [SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice

<table>
<tr><td>Subject contents</td><td>Course content – lecture
1. Software quality introduction
2. Quality in the software development process
3. Software quality models
4. Quality measurements. ISO 9126 quality metrics
5. CMM/CMMI maturity models
6. ISO 9001 quality management system
7. AHP - comparative quality evaluation by Saaty
8. GQM - metrics applied by goals
9. Quality in Agile Programming
10. Bugs, faults, errors and defects
11. Error models
12. Environment models
13. Program models
14. Testing levels
15. Black-box testing strategies
16. White-box testing strategies
17. Test documentation. IEEE standards.
18. Classes of test scenarios
19. Test-case life cycle
20. Structure and attributes of test cases
21. Test implementation methods</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>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>Practical exercise</td><td>50.0%</td><td>50.0%</td></tr>
<tr><td>Written exam</td><td>50.0%</td><td>25.0%</td></tr>
<tr><td>Midterm colloquium</td><td>50.0%</td><td>25.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. Pressman R., Software Engineering. A Practitioner"s Approach. McGraw-Hill, 2005
2. Górski J., Inżynieria oprogramowania w projekcie informatycznym. MIKOM, 2000
3. Bugzilla Documentation, Administrators & End Users: http://www.bugzilla.org/docs/
4. Wiszniewski, B., Bogdan Bereza-Jarociński, B.: Teoria i praktyka testowania programów, PWN, 2006
5. Krawczyk H., Wiszniewski B.: Analysis and Testing of Distributed Software Applications, John Wiley & Sons, 1998.</td></tr>
<tr><td>Supplementary literature</td><td>1. Standard ISO/IEC 9001
2. Standard ISO/IEC 9126
3. Mark C. Paulk, Bill Curtis, Mary Beth Chrissis, Charles V. Weber: The Capability Maturity Model for Software</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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