GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Requirements engineering - lecture, PG_00070915		
Field of study	Informatics		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Software Engineering -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Aleksander Jarzębowicz	
	Teachers	dr inż. Aleksander Jarzębowicz	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=4470

Moodle ID: 4470 Inżynieria Wymagań 2025/2026
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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	15	0.0	0.0	15

Subject objectives

The aim of the course is to provide students with knowledge about requirements engineering, i.e., all activities focused on communication between the IT system supplier and the customer for whom the system is intended, understanding customer needs and translating them into requirements that define the scope and behavior of the system. The course will discuss the processes involved in requirements engineering, such as requirements elicitation and documentation, as well as specific techniques and best practices used in these processes.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W04] knows and understands, to an increased extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or other elements or programmable devices specific to the field of study, and organization of work of systems using computers or such devices	Students recognizes the significance of requirements engineering and knows its processes and techniques used in particular activities included in such processes. Knows and distinguishes various categories of requirements capturing the needs of stakeholders from the domain the IT system is dedicated.	[SW1] Assessment of factual knowledge
[K7_U12] is able, to an increased extent, to analyze the operation of components and systems related to the field of study, as well as to measure their parameters and study their technical characteristics, and to plan and carry out experiments related to the field of study, including computer simulations, interpret the obtained results and draw conclusions	Student is able to specify verifiable and testable software requirements, define acceptance criteria and verification procedures for requirements; also can use such resources in the testing activities.	[SU1] Assessment of task fulfilment

<table>
<tr><td>Subject contents</td><td>Course content – lecture
Scope of topics covered:
The importance of requirements engineering for the final result of an IT project;
Basic concepts of requirements engineering;
Identification of business goals
Identifying stakeholders;
Determining the scope of the problem and the scope of the IT system;
Modeling business events and business processes;
Categories of requirements;
Requirements elicitation, its processes and techniques;
Requirements analysis, its processes and techniques;
Requirements specification, its processes and techniques;
Requirements validation, its processes and techniques;
Requirements management objectives and scope;
Requirements engineering vs. business analysis;
Agile requirements engineering;
Requirements engineering for machine learning-based systems.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></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>written exam</td><td>50.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>Wiegers K., Beatty J., Software requirements, 3rd Edition, Helion, 2014</td></tr>
<tr><td>Supplementary literature</td><td>1. ISO/IEC/IEEE Std 29148-2018, Systems and software engineering Life cycle processes Requirements engineering
2. International Institute of Business Analysis, A Guide to the Business Analysis Body of Knowledge, ver. 3, 2015
3. Project Management Institute, Business Analysis for Practitioners: A Practice Guide, PMI, 2015
4. International Requirements Engineering Board, IREB Certified Professional for Requirements Engineering,foundation level, ver. 3.2, 2024</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<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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