GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Software Project Organization, PG_00063884		
Field of study	Informatics		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
Education level	first-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	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Software Engineering -> Faculty of Electronics, Telecommunications and Informatics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Jakub Miler	
	Teachers	dr inż. Jakub Miler	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	0.0	30
	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	30	2.0	18.0	50

Subject objectives	To learn the organization and course of a software project based on various software development methodologies: agile Scrum, XP, Kanban, Nexus, SAFe, DevOps, and disciplined Rational Unified Process. To be able to select, adapt and combine methodologies and practices.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W10] knows and understands to an advanced degree the basic processes occurring in the life cycle of equipment, objects and technical systems, as well as methods of supporting processes and functions, specific to the field of study	Student knows the methodologies of implementing IT projects in an agile and disciplined manner. Student understands the advantages and limitations of software development methodologies.	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K6_U07] can apply methods of process and function support, specific to the field of study	Student realizuje projekt zgodnie z wybraną metodyką zwinną lub zdyscyplinowaną Student uses the agile documentation techniques to specify software and development plans Student uses the tools for methodologies	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
[K6_U03] can design, according to required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment	Student runs the project following the selected agile or disciplined methodology Student develops the backlogs and plans following the methodologies	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
[K6_U11] can plan and organise individual and team work	Student plans the project following a selected agile or disciplined methodology Student organizes the project infrastructure and the team work	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment

Subject contents

1. Introduction to the subject
2. Introduction to methodologies, classifications, challenges
3. Project infrastructure - people, communication, documentation, tools
4. Examples of projects, their course and work organization
5. Agile mindset
6. Scrum method - introduction, values, roles
7. Scrum method - artifacts
8. Scrum method - events
9. XP method
10. Kanban method
11. Rational Unified Process methodology
12. Scrum of Scrums, Nexus
13. DevOps
14. SAFe framework
15. Selection of methodology for the project

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	51.0%	40.0%
Project	51.0%	60.0%

Recommended reading

Basic literature

1. A. Koszlajda, Zarzadzanie Projektami IT Przewodnik po Metodykach, Helion, 2010
2. K. Schwaber, J. Sutherland, The Scrum Guide, The Definitive Guide to Scrum: The Rules of the Game, Scrum.org, 2020
3. M. Chrapko "Scrum. O zwinnym zarządzaniu projektami", Helion, 2012
4. K. S. Rubin "Scrum. Praktyczny przewodnik po najpopularniejszej metodyce Agile", Helion, 2013
5. M. Lacey "Scrum. Praktyczny przewodnik dla początkujących", Helion, 2014
6. K. Schwaber, Agile Project Management with Scrum, Microsoft Press, 2004
7. K. Beck, C. Andres, Wydajne programowanie. Extreme Programming, wyd. II, MIKOM, 2006
8. A. Cockburn, Agile Software Development. Gra zespołowa, wyd. II, Helion, 2008
9. J. Shore, S. Warden, Agile Development. Filozofia programowania zwinnego, Helion, 2008
10. P. Kruchten, The Rational Unified Process: An Introduction, 3rd edition, Addison-Wesley Professional, 2003
11. P. Kroll, P. Kruchten, The Rational Unified Process Made Easy: A Practitioner's Guide to the RUP, Addison-Wesley Professional, 2003
12. Rational Unified Process at IBM - www-01.ibm.com/software/awdtools/rup/

	Supplementary literature	1. Manifesto for Agile Software Development, www.agilemanifesto.org 2. K. Schwaber, M. Beedle, Agile Software Development with Scrum, Prentice Hall, 2001 3. K. Beck, Extreme Programming Explained: Embrace Change, Addison-Wesley Professional, 1999 4. OpenUP process model, http://epf.eclipse.org/wikis/openup/, EPF
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1. Design the infrastructure for a software project 2. Personas, scenarios, product backlog according to Scrum 3. Sprint backlog according to Scrum 4. Kanban board 5. Sprint retrospective according to Scrum 6. Selection of methodology for the project	
Work placement	Not applicable	

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