GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Methods and Tools for Developers, PG_00063880		
Field of study	Informatics		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2027/2028
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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	2.0
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. Grzegorz Gołaszewski	
	Teachers	dr inż. Grzegorz Gołaszewski	

Lesson types

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

The aim of the course is to familiarize students with the methods and tools of developers' work.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U07] can apply methods of process and function support, specific to the field of study	At each stage of the software life cycle, the student can select and use appropriate tools for development, testing, and implementing software, as well as tools supporting the organization of cooperation.	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools
[K6_W10] knows and understands, to an advanced extent, the parameters, functions, and methods of analysis, design, and optimization of electronic circuits and systems, the definitions of error and measurement uncertainty, measurement methods, including time, frequency, and phase measurements, the properties of converters, and methods of digital signal processing, as well as the basic processes occurring in the life cycle of technical devices, objects, and systems, and methods of supporting processes and functions, specific to the field of study	With the software life cycle, the student knows methods and tools supporting them in both production work related to the organization of cooperation, as well as testing and implementation of software.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation

<table>
<tr><td>Subject contents</td><td>Course content – lecture
1. Using code versioning tools
2. Continuous integration / continuous deployment
3. Development workflows
4. Virtualization / containerization
5. Selected DevOps tool
Course content – laboratory
1. Using code versioning tools
2. Development team collaboration in line with established workflow principles
3. Configuring selected DevOps tools
4. Automating quality assurance and implementation tasks</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>1. Knowledge of sample programming languages
2. Basic knowledge of work organization in Agile methodologies.</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>Laboratoires</td><td>50.0%</td><td>50.0%</td></tr><tr><td>Lecture</td><td>50.0%</td><td>50.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Rob Cowell, Lars Malmqvist: Salesforce DevOps for Architects: Discover tools and techniques to optimize the delivery of your Salesforce projects, Packt Publishing, 2024.
Nigel Poulton, Docker Deep Dive: Zero to Docker in a single book, 2024 edition.</td></tr><tr><td>Supplementary literature</td><td>Tools documentation</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>1. Set up your CI/CD environment.
2. Create and configure a code repository in your chosen Git tool.
3. Create a docker environment for the selected software.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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