GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Configuration Management, PG_00047742		
Field of study	Informatics		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Optional subject group 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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Computer Communications -> Faculty of Electronics, Telecommunications and Informatics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Jacek Rak	
	Teachers	dr hab. inż. Jacek Rak	

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	12.0	0.0	6.0	9.0	0.0	27
	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	27	10.0	63.0	100

Subject objectives	The aim of the course is to enable students to acquire knowledge and skills in the field of configuration management in an IT project and network configuration management

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	- the student is able to indicate the advantages and disadvantages of the given configuration of the communication network monitoring tool - student is able to indicate advantages and disadvantages of a given configuration of network devices with particular emphasis on the configuration of multi-hop information transmission in a heterogeneous environment	[SU2] Assessment of ability to analyse information [SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment
	[K7_U06] can analyse the operation of components, circuits and systems related to the field of study; measure their parameters; examine technical specifications; interpret obtained results and draw conclusions	- the student is able to assess the correctness of the configuration of a communication network monitoring tool - student is able to assess the correctness of advanced configuration of network devices with particular emphasis on the configuration of multi-hop information transmission in a heterogeneous environment	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
	[K7_W03] knows and understands, to an increased extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum	- Student explains the elements of the configuration management plan - Student presents ideas of network configuration and network management. - Student lists the features of SNMP, RMON, MIB network management protocols. - Student presents the design and functions of the network management center	[SW1] Assessment of factual knowledge
	[K7_W41] Knows and understands, to an increased extent, the standards, production methods, life cycle and development trends of software as well as information systems and applications.	- Student explains the principles / strategies of software evolution and maintenance - Student explains the evolutionary strategy of developing an IT system - Student explains the basic concepts and elements that are subject to configuration management - Student explains the change management process - Student identifies the assumptions of group communication protocols - Student explains the idea of managing project repositories	[SW1] Assessment of factual knowledge
	[K7_U02] can perform tasks related to the field of study as well as formulate and solve problems applying recent knowledge of physics and other areas of science	- the student is able to configure the tool for monitoring the communication network - the student is able to perform advanced configuration of network devices with particular emphasis on the configuration of multi-hop information transmission in a heterogeneous environment	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment

<table>
<tr><td>Subject contents</td><td>Lecture:

Software evolution and maintenance - basic definitions and motivations Evolution strategies; costs Software evolution process Strategies of software evolution Configuration management Basic concepts, motivations and scope Configuration management aspects Configuration management process Distributed software management - basics of group communications Project repository management Configuration management plan Configuration management system Configuration management system deployment Virtual work environments Network configuration Network management Network management protocols (SNMP, RMON, MIB) Scheme and functionality of network management centre

Laboratory:

Network monitoring tools Network service management in communication networks

Project:

Group tasks (in groups of 2-3 students) referring to configuration management</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>project pass</td><td>50.0%</td><td>37.5%</td></tr>
<tr><td>lecture test</td><td>50.0%</td><td>37.5%</td></tr>
<tr><td>laboratory pass</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>Mette A., Hass J.: "Configuration management principles and practice"
Solman M.: „Network and distributed sysytems management”
Subramanian M.: „Network management Principles & Practice” RFC 1067, RFC 1155, RFC 1157, RFC 1213, RFC 1321 (www.ietf.org/rfc/)</td></tr>
<tr><td>Supplementary literature</td><td>No requirements</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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