

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Service Platforms and Applications for NGN, PG_00048339								
Field of study	Electronics and Telecommunications								
Date of commencement of studies	February 2026		Academic year of realisation of subject			2025/2026			
Education level	second-cycle studies		Subject group			Optional subject group Specialty 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	1		Language of instruction			Polish			
Semester of study	1		ECTS credits			2.0			
Learning profile	general academic profile		Assessmer	nt form	exam				
Conducting unit	Department Of Telein Wydziały Politechniki	formation Netv Gdańskiej	Networks -> Faculty Of Electronics Telecommunications And Informatics ->						
Name and surname	Subject supervisor		dr inż. Marcin Narloch						
of lecturer (lecturers)	Teachers		dr inż. Marcin	Narloch					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	30.0	0.0	0.0	0.0		0.0	30	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic led in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	30		4.0		16.0		50	
Subject objectives	Student describes realizations of service platforms for the next generation networks. Student determines correct realizations of applications fulfilling users needs in next generation networks						determines		
Learning outcomes	Course out	Subject outcome			Method of verification				
	[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 knows platforms of service control and application servers solutions for services in Next Generation Networks.			[SW1] Assessment of factual knowledge			
	[K7_W10] knows and understands, to an increased extent, 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 platforms of service control and application servers solutions for services in Next Generation Networks and understands control information flows for realisation of services in NGN networks.			[SW1] Assessment of factual knowledge			

Subject contents	 The importance of service platforms in the context of NGN 2. IMS as an example of NGN service architecture 3. The role of the IMS service control layer for providing services 4. Interworking with application layer in IMS for providing services 5. Technologies of IMS application layer development 6. The role of component-oriented architectures in applications for NGN 6. Java EE environment in programming applications for NGN 7. JAIN SLEE in the context of applications for NGN 8. Service execution environment (SLEE Container) 9. JAIN SLEE components and component interfaces 10. Standard components (Event and Activity) and their role in JAIN SLEE 11. SBB (Service Building Blocks) for providing services in JAIN SLEE 12. The notion of event and event handling in JAIN SLEE 13. Communication with environment through Resource Adaptors and Resource API 14. Standard functionalities of application server 15. Application of standard Java API for service functionality extension 16. Elements of JAIN SLEE application in different telecommunication areas 19. Analysis of exemplary JAIN SLEE applications 20. SIP Servlets in the context of applications for NGN 21. SIP Servlet Container 22. Application router 23. SIP Servlet API and applications developed with SIP Servlet API 24. Specificity of SIP Servlet application programming 25. Analysis of exemplary SIP Servlet API 24. Specificity of SIP Servlet application for NGN application development 27. Architecture for providing Parlay/OSA services 28. Application programming 31. Analysis of exemplary XIP Servlets 30. Specificity of Parlay/OSA application programming 31. Analysis of exemplary Parlay/OSA applications server 33. Specificity of application for NGN 33. Specificity of application programming for mobile platforms in the context of applications for NGN 33. Specificity of application programming for mobile platforms in the context of applications for NGN 					
Prerequisites and co-requisites	No requirements					
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade			
	Midterm colloquium	50.0%	100.0%			
Recommended reading	Basic literature Material prepared by the lecturer in the form of xeroxcopy.					
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	eResources addresses	Adresy na platformie eNauczanie:				
Example issues/ example questions/ tasks being completed	1. Characterisation of IMS architecture.					
	2. Characterisation of services for NGN networks based on Jain SLEE platform.					
	3. Characterisation of services for NGN networks based on SipServlets platform.					
	4. Characterisation of services for NGN networks based on Parlay/OSA concepts.					
	5. Future development directions of NGN services platforms.					
Work placement	Not applicable	Not applicable				

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