

## Subject card

Subject name and code	Internet Services Architectures, PG_00053907							
Field of study	Informatics							
Date of commencement of studies	October 2023		Academic year of realisation of subject			2025/2026		
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 cred	ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment			
Conducting unit	Department of Computer Architecture -> Faculty of Electronics, Telecommunications and Informatics							
Name and surname	Subject supervisor		dr hab. inż. Joanna Szłapczyńska					
of lecturer (lecturers)	Teachers		dr hab. inż. Joanna Szłapczyńska					
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	roject Seminar SUM		
of instruction	Number of study hours	30.0	0.0	15.0	0.0		0.0	45
	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	45		4.0		26.0		75
Subject objectives	The goal is to make stechnologies implem			architectures o	f distribu	uted sys	stems as wel	l as

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Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W04] Knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices	Knows and understands the organization of cloud computing systems.	[SW1] Assessment of factual knowledge
	[K6_W01] Knows and understands, to an advanced extent, mathematics necessary to formulate and solve simple issues related to the field of study	Knows and understands mathematics to the extent necessary to calculate simple issues related to the operations of the cloud computing systems, e.g. determining the size of an instance pool based on the current load.	[SW1] Assessment of factual knowledge
	[K6_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 technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	Can make a critical analysis of how services work in the cloud. Is able to use the experience related to maintaining high-availability systems in the cloud.	[SU1] Assessment of task fulfilment
	[K6_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study	Is able to use his knowledge of programming methods and techniques in creating software in serverless architecture.	[SU1] Assessment of task fulfilment

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2. What is cloud computing 3. Cloud economics 4. Basic cloud services 5. Security in the cloud 6. Databases in the cloud 7. Flexibility of cloud applications 8. High availability and fault tolerance 9. Cloud infrastructure management automatization 10. Data storage in the cloud 11. Reliability of cloud applications 12. Performance of cloud applications 12. Performance of cloud applications 13. Cost effectiveness 14. Design patterns for cloud applications 13. Cost effectiveness 14. Design patterns for cloud applications 15. Subject passing criteria passing present part of the final grade platoratory exercises	Subject contents	Passing criteria					
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