



Subject card

Subject name and code	Application Servers in Medicine, PG_00068241						
Field of study	Biomedical Engineering, Biomedical Engineering, Biomedical Engineering						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2029/2030	
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	4	Language of instruction				Polish	
Semester of study	7	ECTS credits				4.0	
Learning profile	general academic profile	Assessment form				exam	
Conducting unit	Department of Biomedical Engineering -> Faculty of Electronics Telecommunications and Informatics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Adam Bujnowski				
	Teachers		dr inż. Adam Bujnowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	15.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	The course aims to introduce students to the topic of IT services, covering both the design and organization of server infrastructure (e.g. data centers) and the techniques for implementing common network services in information systems.						
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		Student creates service for automated data collection.			[SU1] Assessment of task fulfilment	
	[K6_U02] can perform tasks related to the field of study in an innovative way as well as solve complex and nontypical problems, applying knowledge of physics, in changing and not fully predictable conditions		Student creates thematic service using given tools			[SU4] Assessment of ability to use methods and tools	
[K6_U07] can apply methods of process and function support, specific to the field of study		Student creates selected elements of bigger system on the base of given information			[SU2] Assessment of ability to analyse information		
Subject contents	Course content – lecture 1. Basic concepts related to servers, 2. Server requirements, 3. Methods for ensuring service continuity, 4. Server operating environment, 5. Network fundamentals layered model and communication protocols, 6. Clientserver architecture, 7. Operating system as a service platform, 8. Configuration of mail servers and protocols (SMTP, POP3, IMAP), 9. File transfer over a network, 10. Web services and HTTP servers, 11. Techniques for creating dynamic web content, 12. Servlet containers and web applications, 13. Cloud computing, 14. Practical applications of application servers, 15. Examples of service server applications in industry - particularly in medicine						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final writing class	60.0%	50.0%
	laboratory achievements	60.0%	50.0%
Recommended reading	Basic literature	Multiple authors, Vademecum teleinformatyka, Tom 1, IDG 1999	
		Multiple authors, Vademecum teleinformatyka, Tom 2, IDG 1999	
		Multiple authors, Vademecum teleinformatyka, Tom 3, IDG 1999	
		Barnett, Apache, Zabezpieczenia aplikacji i serwerów www, Helion , 2007	
	Supplementary literature	Ford, Apache 2. Pocket reference. O'relly	
		www.ltsp.org	
		www.apache.org	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Configure the http server in selected configurations How does DNS work? The principle of e-mail Discuss the types of uninterruptible power supplies What is redundancy and where is it used?		
Practical activities within the subject	Not applicable		

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