



## Subject card

Subject name and code	Transfer, collection and data security, PG_00044137						
Field of study	Mathematics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Applied Mathematics -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Magdalena Chmara				
	Teachers		dr hab. Paweł Pilarczyk  dr inż. Magdalena Chmara				
Lesson types and methods of instruction	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 purpose of the course is to familiarize you with the formats and tools for secure data storage, analysis and transmission						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
Subject contents	<ul style="list-style-type: none"><li>- overview of different types of databases</li><li>- creation of database applications</li><li>- data transmission on the internet</li><li>- OSI model</li><li>- Security of databases</li><li>- RODO</li><li>- elements of cryptography</li><li>- threats to data</li></ul>						
Prerequisites and co-requisites	databases and programming						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Project		60.0%		34.0%		
	Laboratory		60.0%		33.0%		
	Lecture		60.0%		33.0%		
Recommended reading	Basic literature		Deshpande, Prachi S., et al. <i>Security and Data Storage Aspect in Cloud Computing</i> by Prachi S. Deshpande, Subhash C. Sharma, Sateesh K. Peddoju. Springer Singapore, 2019.  Shannon Bradshaw Eoin Brazil, Chodorow, Kristina. <i>MongoDB: Powerful and Scalable Data Storage</i> O'Reilly, 2019.				
	Supplementary literature		Hu, Fei. <i>Big Data: Storage, Sharing, and Security / Edited by Fei Hu</i> . CRC Press, 2016.				

	eResources addresses	Uzupełniające Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	How to keep your data safe on the Internet?  The differences between the HTTP and HTTPS protocols.  Differences between relational and graph databases.	
Work placement	Not applicable	

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