



## Subject card

Subject name and code	Internet exploration, PG_00044131						
Field of study	Mathematics						
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			blended-learning		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Instytut Matematyki Stosowanej -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Magdalena Lemańska					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	E-learning hours included: 20.0						
	Adresy na platformie eNauczanie:						
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		60.0		125
Subject objectives	Knowledge of Internet technologies. Skill to work in a computing cloud.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_K03	Student uses cloud computing to solve a mathematical problem. The student is able to organize remote work in a team using the available tools.			[SK3] Assessment of ability to organize work [SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice		
	K6_U12	The student knows the basic Internet technologies. Can create a website and present the results of the completed task.			[SU5] Assessment of ability to present the results of task [SU1] Assessment of task fulfilment		
	K6_U07	The student is able to specify the problem. The student is able to recognize a problem that can be solved algorithmically. The student is able to choose a tool to solve the problem. The student is able to present the results on the Internet.			[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task		
	K6_K02	The student uses the technical documentation and the Internet to find a solution to the problem.			[SK5] Assessment of ability to solve problems that arise in practice		
	K6_W09	The student uses a software package to perform calculations.			[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	<p>1. Basic internet technologies.  2. The use of internet technologies to present the results of data analysis.  3. Creating dynamic websites.  4. Creating responsive websites.  5. Content management systems.  6. WWW servers. Website publishing.  7. Optimization and positioning of websites (SEO)  8. Computer clusters.  9. The concept of concurrent programming.  10. The concept of working in a cloud.  11. Clouds for computing.</p> <p>Lab:  Implementation of practical tasks corresponding to the issues discussed during the lecture, including:  1. Website creating.  2. Data analysis on the Tryton cluster at GUT, which is part of the Information Center of the Tri-City Academic Computer Network (CI TASK). [If consent is given to create student accounts.]  3. Data analysis in cloud computing.</p>											
Prerequisites and co-requisites	Computer skills. Access to the Internet.											
Assessment methods and criteria	<table border="1" data-bbox="453 808 1485 913"> <thead> <tr> <th data-bbox="453 808 794 842">Subject passing criteria</th> <th data-bbox="794 808 1142 842">Passing threshold</th> <th data-bbox="1142 808 1485 842">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 842 794 875"></td> <td data-bbox="794 842 1142 875">50.0%</td> <td data-bbox="1142 842 1485 875">70.0%</td> </tr> <tr> <td data-bbox="453 875 794 913"></td> <td data-bbox="794 875 1142 913">0.0%</td> <td data-bbox="1142 875 1485 913">30.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade		50.0%	70.0%		0.0%	30.0%
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Recommended reading	Basic literature	<p>1. Erl, Puttini, Mahmood, Cloud Computing: Concepts, Technology &amp; Architecture, Pearson. Education, Prentice Hall, 2013.  2. Technical documentation and tutorials (the list will be published on the learning platform).</p>										
	Supplementary literature	<p>1. Arshdeep Bahga, Vijay Madisetti, Cloud Computing: A Hands-On Approach, CreateSpace Independent Publishing Platform, 2013.  2. Ray J Rafaels, Cloud Computing: From Beginning to End, CreateSpace Independent Publishing Platform, 2015.</p>										
	eResources addresses											
Example issues/ example questions/ tasks being completed												
Work placement	Not applicable											