



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	<div>1. Basic internet technologies.</div> <div>2. The use of internet technologies to present the results of data analysis.</div> <div>3. Creating dynamic websites.</div> <div>4. Creating responsive websites.</div> <div>5. Content management systems.</div> <div>6. WWW servers. Website publishing.</div> <div>7. Optimization and positioning of websites (SEO)</div> <div>8. Computer clusters.</div> <div>9. The concept of concurrent programming.</div> <div>10. The concept of working in a cloud.</div> <div>11. Clouds for computing.</div> <div>Lab:</div> <div>Implementation of practical tasks corresponding to the issues discussed during the lecture, including:</div> <div>1. Website creating.</div> <div>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.]</div> <div>3. Data analysis in cloud computing.</div>		
Prerequisites and co-requisites	Computer skills. Access to the Internet.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		50.0%	70.0%
		0.0%	30.0%
Recommended reading	Basic literature	<div>1. Erl, Puttini, Mahmood, Cloud Computing: Concepts, Technology & Architecture, Pearson. Education, Prentice Hall, 2013.</div> <div>2. Technical documentation and tutorials (the list will be published on the learning platform).</div>	
	Supplementary literature	<div>1. Arshdeep Bahga, Vijay Madisetti, Cloud Computing: A Hands-On Approach, CreateSpace Independent Publishing Platform, 2013.</div> <div>2. Ray J Rafaels, Cloud Computing: From Beginning to End, CreateSpace Independent Publishing Platform, 2015.</div>	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		