GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Internet exploration, PG_00044131		
Field of study	Mathematics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
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	Institute of Applied Mathematics -> Faculty of Applied Physics and Mathematics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Magdalena Lemańska	
	Teachers		

Lesson types

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

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_W09	The student uses a software package to perform calculations.	[SW3] Assessment of knowledge contained in written work and projects
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_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.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
K6_U12	The student knows the basic Internet technologies. Can create a website and present the results of the completed task.	[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task
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.	[SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills [SK3] Assessment of ability to organize work

<table>
<tr><td>Subject contents</td><td>Course content – lecture

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.

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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Computer skills. Access to the Internet.</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td></td><td>0.0%</td><td>30.0%</td></tr><tr><td></td><td>50.0%</td><td>70.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>1. Erl, Puttini, Mahmood, Cloud Computing: Concepts, Technology & Architecture, Pearson.
Education, Prentice Hall, 2013.
2. Technical documentation and tutorials (the list will be published on the learning platform).</td></tr><tr><td>Supplementary literature</td><td>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.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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