

於。GDAŃSK UNIVERSITY 奶 OF TECHNOLOGY

Subject card

Subject name and code	Modelling the NET, PG_00048251							
Field of study	Informatics							
Date of commencement of studies	February 2023		Academic year of realisation of subject			2023/2024		
Education level	second-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	2		Language of instruction			Polish		
Semester of study	3		ECTS credits			4.0		
Learning profile	general academic profile		Assessment form			exam		
Conducting unit	Department of Algorithms and Systems Modelling -> Faculty of Electronics, Telecommunications and Informatics							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Krzysztof Manuszewski					
	Teachers		dr hab. inż. M	dr hab. inż. Michał Małafiejski				
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Project	t	Seminar	SUM
of instruction	Number of study hours	30.0	0.0	0.0	0.0		0.0	30
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	ning activity Participation in classes includ plan		n didactic Participation in ed in study consultation hours		Self-study		SUM
	Number of study hours	30		8.0		62.0		100
Subject objectives	An analysis of the social networks based on the graph model. Implementation of the selected elements of a web search.							
Learning outcomes	Course out	Subi	Subject outcome			Method of verification		
Learning outcomes	[K7_W03] Knows and understands, to an increased extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum.		The student gets acquainted with the models of communication on the Internet and its social aspects.			[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		
	[K7_W01] Knows and understands, to an increased extent, mathematics to the extent necessary to formulate and solve complex issues related to the field of study.		A student can develop and implement a simple search engine of online resources, including a web robot.			[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		

Subject contents	Introduction to social networks						
	Web graph						
	Introduction to search engines						
	Analysis of the content of document						
	Information extraction, categorization and clustering						
	Link analysis						
	Modeling and understanding human behaviour on the Web						
	Hidden Markov models						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
	Lecture	50.0%	100.0%				
Recommended reading	Basic literature	P. Baldi, P. Frasconi, P. Smyth: Moc Wiley 2003.	leling the Internet and the Web,				
		Mark Stamp, Revealing Introduction to Hidden Markov Models, Department of Computer Science, San Jose State University (2012)					
		Andrew Y. Ng, Alice X. Zheng, Michael I. Jordan, Stable Algorithms for Link Analysis, Computer Science Division U.C. Berkeley					
	Supplementary literature	pplementary literature Lawrence R. Rabiner, A tutorial on hidden markov models and selected applications in speech recogniction, Proc. of the IEEE, vol. 77, no. 2, (1989)					
	eResources addresses Adresy na platformie eNauczanie:						
Example issues/ example questions/ tasks being completed	-						
Work placement	Not applicable						