



Subject card

Subject name and code	INFORMATION AND KNOWLEDGE MANAGEMENT, PG_00061110						
Field of study	Management						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group		Obligatory subject group in the field of study 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		English		
Semester of study	3		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Management -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Edward Szczerbicki				
	Teachers		prof. dr hab. inż. Edward Szczerbicki				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	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	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		5.0		40.0	75
Subject objectives	Uses modern trends in the field of information and knowledge management and engineering in the era of knowledge-based intelligent systems and the semantic society						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U03] formulates research problems and selects appropriate analytical methods for their effective solution, using advanced IT tools, and evaluates the results critically		formulates research problems in the area of knowledge management choosing appropriate methods of solving them		[SU4] Assessment of ability to use methods and tools		
	[K7_W02] explains the meaning and interdependence of the key components describing economic processes, using in-depth knowledge consistent with the main trends in the development of scientific disciplines related to the field of study		explains the importance and interdependencies between the key factors of the modern concept of management based on knowledge and information		[SW1] Assessment of factual knowledge		
Subject contents	Contemporary intelligent systems based on knowledge The importance of experience in the formalization and representation of information and knowledge Methods and techniques of artificial intelligence (AI) in modern intelligent decision support systems Knowledge as a resource and its role in the semantic society Knowledge representation Management and knowledge engineering The concept of experience collection (SOE) and decision DNA (DDNA) Representation of knowledge through a set of experiences Ontologies and semantic web Trust and security and its role and importance in intelligent systems e-Decision community concept Challenges of the upcoming fourth industrial revolution (Industry 4.0) and the Internet of Things (IoT) in the area of intelligent management and information and knowledge engineering						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Oral exam		50.0%		100.0%		

Recommended reading	Basic literature	<p>Huk, M., M. Maleszka, E.Szczerbicki: Intelligent Information and Database Systems: Recent Developments, Springer-Verlag Studies in Computational Intelligence, 2019</p> <p>Cesar Sanin, Edward Szczerbicki, Experience Based Knowledge Representation for Internet of Things and Cyber Physical Systems with Case Studies, Future Generation Computer Systems, 2018, DOI: 10.1016/j.future.2018.01.062</p> <p>E.Szczerbicki, C Sanin, <i>Knowledge Management and Engineering with Decisional DNA</i>, Springer-Verlag Intelligent Systems Reference Library, 2020, pp 260 https://doi.org/10.1007/978-3-030-39601-5</p>
	Supplementary literature	<p>Zhang H., Sanin C., and E Szczerbicki, When Neural Networks meet Decisional DNA: A Promising New Perspective for Knowledge Representation and Sharing, Cybernetics and Systems: An International Journal 2016 Vol 47, DOI: 10.1080/01969722.2016.1128776, pp. 140-148</p> <p>M. Bilal Ahmed, Cesar Sanin, Edward Szczerbicki,, Experience-based Decisional DNA (DDNA) to support product development, Cybernetics and Systems: An International Journal 2018 Vol 49, DOI: 10.1080/01969722.2017.1418743</p>
	eResources addresses	<p>Podstawowe</p> <p>https://enauczanie.pg.edu.pl/moodle/course/view.php?id=39523 - Lecture notes INFORMATION AND KNOWLEDGE MANAGEMENT 2024/2025</p> <p>Uzupełniające</p> <p>Adresy na platformie eNauczanie:</p> <p>INFORMATION AND KNOWLEDGE MANAGEMENT 2024/2025 - Moodle ID: 39523</p> <p>https://enauczanie.pg.edu.pl/moodle/course/view.php?id=39523</p>
Example issues/ example questions/ tasks being completed	What are the three main advantages of using simulation methods to support decision-making processes	
Work placement	Not applicable	

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