



Subject card

Subject name and code	Informatization strategies, PG_00045371						
Field of study	Data Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
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			at the university		
Year of study	3	Language of instruction			English		
Semester of study	5	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Bartosz Woliński				
	Teachers		dr inż. Bartosz Woliński				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Informatization strategies (I/lab)_STACJ._winter 2022/23 - Moodle ID: 25799 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25799						
Additional information:							
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		4.0		41.0	75
Subject objectives	The aim of the course is to prepare students for developing enterprise informatization strategies, including definition of the current state and future state, and effectively use Enterprise Architecture for its industrialization.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K01] is aware of quickly changing trends and the resulting need for further education and self-improvement in the area of the performed profession of an engineer with IT and economic-financial skills.		Student is able to select the informatization strategy to the major goals and tasks performed in an enterprise.		[SK5] Assessment of ability to solve problems that arise in practice		
	[K6_U03] analyses problems and creates appropriate models, data structures and algorithms (including heuristic and numerical ones), assesses their computational complexity, estimates errors of the received solutions		Student has the necessary skills to choose adequate methods and tools for the implementation of IT strategies.		[SU4] Assessment of ability to use methods and tools		
	[K6_W02] Knows and understands the standards of network management, architecture, technologies and services of telecommunications networks. Knows the main protocols of packet networks, understands the operation of local networks and network connection rules.		Student possesses adequate knowledge about selection of information technology elements for the purpose of the IT strategy implementation.		[SW1] Assessment of factual knowledge		

Subject contents	<ul style="list-style-type: none"> • Informatization strategy definition, • Strategic Alignment Model, • Informatization strategy formulation process, • Tools and method used for IT strategy: AS-IS analysis, SWOT, TO-BE definition, IT BSC, SMART goals definition, IT KPI's, • Communication and resistance to change mitigation, • IT Priorities definition, • Monitoring tools implementation, • Enterprise architecture frameworks, • Enterprise architecture implementation (TOGAF), • Risk management in IT strategy. 		
Prerequisites and co-requisites	Foundations of informatics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Laboratory exercises reports and presentation	50.0%	40.0%
	Written exam	50.0%	60.0%
Recommended reading	Basic literature	<ul style="list-style-type: none"> • Albeladi K.S., Khan U.A., Khan P.M. (2014). Driving business value through effective IT strategy development. 2014 International Conference on Computing for Sustainable Global Development (INDIACom); https://ieeexplore.ieee.org/document/6828021. • Chen D.Q., Mocker M., Preston D.S., Teubner A. (2010). Information systems strategy: reconceptualization, measurement, and implications, MIS Quarterly, 34(2), 233259, • de Souza Bermejo P.H., Olímpio Tonelli A., Zambalde A.L., Leomar Todesco J. (2014). Towards an understanding of information technology strategy development based on knowledge management. Revista de Ciências Da Administração, 16(40), 139155. • Kaplan, R.S., Norton, D.P., (1992), The Balanced Scorecard Measures that Drive Performance, Harvard Business Review (January/February 1992), ISSN 0017-8012, Retrieved 2020-01-15.. • TOGAF, https://pubs.opengroup.org/architecture/togaf9-doc/arch/index.html. • ArchiMate, https://www.archimatetool.com/ 	
	Supplementary literature	<p>Stanisław Wrycza, Bartosz Marcinkowski, Krzysztof Wyrzykowski; Język UML 2.0 w modelowaniu systemów informatycznych"; Helion 2005</p> <p>Zenon Biniek; Wybrane elementy zarządzania projektem informatycznym; Vizja w-wa 2010</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none"> • IT strategy definition and project, • Analysis of the impact of IT on the company's efficiency • Project of the target IT vision with the BSC (Balanced Score Card), • Strategic goals definition (SMART technique), • Project of monitoring and KPI's for the IT area 		
Work placement	Not applicable		