Subject card

Subject name and code	Synthesis of Business Applications, PG_00048254
Field of study	Informatics

Date of commencement of studies	February 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Optional subject group Specialty 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	3.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department Of Algorithms And Systems Modelling -> Faculty Of Electronics Telecommunications And Informatics -> Wydziały Politechniki Gdańskiej

Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Krzysztof Manuszewski
	Teachers	dr inż. Krzysztof Manuszewski

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						

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	6.0	39.0	75

Subject objectives	The goal of the lecture is give an preparation for building of the big information systems Line of Business class. The Lecture focuses on both technological and methodological aspects of such solutions.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U43] can apply information technologies in market economy and information society conditions as well as algorithmize and computerize cognitive and decision-making processes in other areas of knowledge	Is able to apply follow the nowadays trends in developed systems	[SU1] Assessment of task fulfilment
	[K7_U04] can apply knowledge of programming methods and techniques as well as select and apply appropriate programming methods and tools in computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, making assessment and critical analysis of the prepared software as well as a synthesis and creative interpretation of information presented with it	Is able to implement data intensive systems	[SU1] Assessment of task fulfilment
	[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	Knows plug-in oriented approaches, and embedded script based solutions	[SW1] Assessment of factual knowledge
	[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	Student understands how to build elastic it systems with utilization business processes and orchestration process,	[SW1] Assessment of factual knowledge

Subject contents	
	Patterns & Practices solutions for enterprise systems, Enterprise Library.
	MS Office based applications, VS Tools For MS Office. Chatbots and Conversational UI Development
	Business Workflows modelling and standards, Ms Workflow Foundation.
	Extensions for Ms VisualStudio and Ms Office.
	Efficient processing of data .
	Continuous Integration/Delivery.
	Scripting and general approach to systems management: Windows Script Hosting. WMI, Powershell.
	Possible approaches to deployment and installation. Pipeline CI/CD

Prerequisites and co-requisites	
	Well knowledge about .NET platform and distributed systems.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	laboratories	60.0%	60.0%
	exam	0.0%	40.0%

Recommended reading	Basic literature	J. Humble, D. Farley, Continuous Delivery, Addison Wesley 2011
		D. Finke, MS Windows PowerShell for Developers, O'Reilly 2012
		M.T. Nygard, Release It, 2017
	Supplementary literature	B. Bukovics, Windows Workflow in .NET 4, Apress, 2010
		S. Janarthanam, Hands-On Chatbots and Conversational UI Development. Packt 2017
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Modelling and implementation of Business Processes with Ms WorkflowFoundation	
	Development of scripts and hosting script based solutions with PowerShell	
	Implementation CD process with based on Team City	
	Implementing data processing (eg. base on SPARK.)	
Work placement	Not applicable	

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