

Subject card

Subject name and code	IT Tools and Techniques in Business Process Management, PG_00156500						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	Master's 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		Polish polish		
Semester of study	3		ECTS credits		6.0		
Learning profile	academic		Assessment form				
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Bartłomiej Gawin				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	45.0	0.0	0.0	60
	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	60		20.0		70.0	150
Subject objectives	Mastering the skills of multidimensional modeling, parameterization, simulation and analysis of business processes in dedicated IT tools.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[liEMU2_W05] The student has an in-depth knowledge of socio-economic data sources, their databases and how to create them.	Has in-depth knowledge of socio-economic data sources, their databases and how they are created and used to model and simulate business processes.	[SW2] presentation/project/paper/report
	[liEMU2_K04] The student can work in a team, co-create it, effectively manage and supervise it; efficiently adapts his behavior and conduct to his role in it; is ready to take responsibility for the team and bear the consequences; understands the necessity of systematicity and consistency in action; is open to other team members and critical of himself.	Able to work in an IT analytical team, co-create it, effectively manage it and supervise it; efficiently adapts his/her behaviour and manner of conduct to the role played in it; is ready to take responsibility for the team and bear the consequences; understands the need for systematicity and consistency in action; is open to other team members and critical of himself/herself.	[SK2] presentation/project/paper/report
	[liEMU2_W04] The student has an in-depth knowledge of advanced mathematical, statistical, econometric and IT methods that enable the acquisition, processing and analysis of data reflecting the functioning and growth of the national economy and its components, as well as the phenomena and processes occurring in their environment.	Has in-depth knowledge of advanced mathematical, statistical, econometric and IT methods enabling the acquisition, processing and analysis of data for modelling and simulation of business processes.	[SW2] presentation/project/paper/report
	[liEMU2_K05] The student can think and act in an entrepreneurial manner and flexibly adapt to changing environmental conditions. Thinks creatively and can go beyond the usual patterns.	Is able to think and act in an entrepreneurial and process-oriented manner and flexibly adapt to changing environmental conditions.	[SK2] presentation/project/paper/report
	[liEMU2_U07] The student is able to build advanced formal models of complex economic phenomena and processes, estimate them, carry out their verification and apply them to modeling, forecasting and optimization of resources of economic institutions of varying degrees of complexity, their structure and the course of processes in them.	Can build advanced business process models in dedicated IT tools, parameterize and estimate them, verify them and use them for modeling, forecasting and resource optimization.	[SU2] presentation/project/paper/report
	[liEMU2_K01] The student understands the need for continuous completion and deepening of acquired knowledge. The student inspires and organizes others' learning processes.	Understands the need to continually supplement and deepen acquired knowledge of multidimensional modeling, parameterization, simulation and analysis of business processes in dedicated IT tools; inspires and organizes the learning process of others.	[SK2] presentation/project/paper/report
	[liEMU2_U02] The student is able to proficiently acquire detailed information about economic processes and phenomena through direct observation, planned experimentation or database queries, as well as collect and process it using modern information technology tools.	Is able to efficiently obtain detailed information about economic processes and phenomena through direct observation, planned experiment or database query, and collect and process it for modeling, parameterization, simulation and analysis of business processes.	[SU2] presentation/project/paper/report
	[liEMU2_K02] The student can communicate freely with the public on specialised topics in the field of computer science and econometrics in and outside the workplace, communicate his knowledge and share his skills through various media. Culturally participates in discussions, is not afraid to ask questions and knows how to give constructive criticism.	Is able to communicate freely with the environment on specialist topics in the field of computer science and econometrics in and outside the workplace, convey his/her knowledge and share his/her skills using various media.	[SK2] presentation/project/paper/report

	Course outcome	Subject outcome	Method of verification
	[liEMU2_K03] The student is able to communicate freely with the public inside and outside the workplace, transfer his knowledge and share his skills through various media.	Is able to communicate freely with the environment on specialist topics in the field of computer science and econometrics in the workplace and outside it, convey his/her knowledge and share his/ her skills using various media.	[SK2] presentation/project/paper/ report
Subject contents	A. Lecture topics Discussion of the basics of business process management Discussion of design notations for modeling business processes and decision rules Discussion of tools for designing, simulating, and analyzing business processes Discussion of tools for designing, simulating, and analyzing decision rules in business processes B. Exercise topics Practical presentation and application of the Adonis tool in exercises Practical presentation and application of the Signavio tool in exercises		
Prerequisites and co-requisites	Prerequisites: Economic informatics, databases Additional requirements: Basic knowledge of organizational management		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project work	50.0%	100.0%
Recommended reading	Basic literature	- Gawin B., Systemy informatyczne w zarządzaniu procesami workflow, PWN 2015 - Gawin B., Marcinkowski B.: Symulacje procesów biznesowych. Standardy BPMS i BPMN w praktyce, Helion 2013	
	Supplementary literature	- BOC: ADONIS User Manual - Signavio: Signavio User Manual - Mathias Weske, Business Process Management: Concepts, Languages, Architectures, Springer 2012	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Design a multidimensional business process model in the ADONIS system, parameterize it, and perform path simulation and load analysis.		
Work placement	Not applicable		

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