

Subject card

Subject name and code	Management and Optimization of Business Processes, PG_00156637						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
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	part-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish polish		
Semester of study	2		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Bartłomiej Gawin				
	Teachers		dr hab. inż. Bartłomiej Gawin				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	9.0	0.0	0.0	9
	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	9		15.0		55.0	79
Subject objectives	- Familiarization with business process management in the ADONIS environment (modeling, simulation, analysis) - Familiarization with designing and publishing process documentation of workflow systems						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEMU2_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 acquisition, processing and analysis of data for modeling and simulation of business processes	[SW2] presentation/project/paper/report
	[IiEMU2_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 for continuous supplementation and deepening of acquired knowledge in multidimensional modeling, parameterization, simulation and analysis of business processes in dedicated IT tools.; inspires and organizes the learning process of other people.	[SK2] presentation/project/paper/report
	[IiEMU2_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.	Can 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
	[IiEMU2_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
	[IiEMU2_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 the sources of socio-economic data, their databases and how they are created and used to model and simulate business processes.	[SW2] presentation/project/paper/report
Subject contents	• Practical use of techniques (BPMN, BPMS) and tools (ADONIS) for designing, simulating and analyzing business workflow processes • Practical examples of designing and publishing process documentation		
Prerequisites and co-requisites	• Software Engineering Business Process • Modeling IT System • Design Fundamentals of • Process Organization Management • Database Fundamentals		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project	50.0%	100.0%
Recommended reading	Basic literature	• Gawin B., Systemy informatyczne w zarządzaniu procesami workflow • Gawin B., Marcinkowski B.: Symulacje procesów biznesowych. Standardy BPMS i BPMN w praktyce • BOC: ADONIS User Manual (w KIE jest dostępna wersja elektroniczna) • DISCO User manual (http://www.fluxicon.com)	
	Supplementary literature	Mathias Weske (2012): Business Process Management: Concepts, Languages, Architectures, Springer	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Design a multidimensional business process model in ADONIS, parameterize it and perform path simulation and load analysis.		
Work placement	Not applicable		

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