University of Gdańsk

Subject card

Subject name and code	IT Tools and Techniques in Business Process Management, PG_00128875		
Field of study	Information Science and Econometrics		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2024/2025
Education level	postgraduate studies	Subject group	Obligatory subject group 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	Katedra Informatyki Ekonomicznej -> Faculty of Management		
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	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	0.0	0.0	60

Subject objectives	Developing skills in multidimensional modeling, parameterization, simulation and analysis of business processes in dedicated IT tools.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEMU2_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.	Is 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 systematic and consistent action; is open to other team members and critical of himself/herself.	[SK2] presentation/project/paper/ report
	[IiEMU2_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 others 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
	[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 the acquisition, processing and analysis of data for the modeling and simulation of business processes.	[SW2] presentation/project/paper/ report
	[IiEMU2_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 manner and flexibly adapt to changing environmental conditions.	[SK2] 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 to continuously 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
	[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.	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
	[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 socio-economic data sources, their databases and how they are created and used to model and simulate business processes.	[SW2] presentation/project/paper/ report
	[IiEMU2_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 within the IT analytical team at work and outside of it, transfer his/her knowledge and share his/her skills	[SK2] presentation/project/paper/ report

	Course outcome	Subject outcome	Method of verification
	[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.	Is able to 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

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 process organization management

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
semester project grade	50.0%	80.0%
tasks performed during exercises	50.0%	20.0%

Recommended reading

Basic literature

Literature required for final crediting of classes (passing the exam):

used during classes:

- 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

Literature for self-study by the student

- BOC: ADONIS User Manual
- Signavio: Signavio User Manual

Supplementary literatur:

Mathias Weske, Business Process Management: Concepts, Languages, Architectures, Springer 2012

eResources addresses

Adresy na platformie eNauczanie:

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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