



## Subject card

Subject name and code	Business Proces Management, PG_00068503						
Field of study	Engineering Management						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
Education level	first-cycle 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 (on-line)		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		6.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department Of Management -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	16.0	0.0	24.0	0.0	0.0	40
	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	40		6.0		104.0	150
Subject objectives	Analyzes organization processes using the simulation modeling methodology, creating models and using simulation results to improve processes						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K03] is prepared to critically assess the knowledge they possess, which is necessary for solving cognitive and practical problems, and to supplement any gaps with opinions from external experts.		critically reviews the assumptions and outcomes of simulation models and, when necessary, seeks expert input or external knowledge to refine problem-solving approaches		[SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work		
	[K6_U01] is able to analyze and evaluate complex processes in terms of their improvement, using various methods, including analytical and simulation techniques.		is able to develop models reflecting real-world processes and use them to identify areas for improvement, applying suitable analytical and simulation tools.		[SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task		
	[K6_W05] possesses advanced knowledge in integrating data from various sources and in the methods that enable a comprehensive analysis of contemporary management issues.		is familiar with approaches and techniques for integrating diverse data types to model and understand complex phenomena in organizational and decision-making processes		[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	Introduction to the subject Defining basic concepts, queuing systems, models General characteristics of the process approach in the organization Simulation model structure (static and dynamic) Principles of building a process map Introduction to iGrafx Structure: department, activity, resources, costs, transaction generator, schedules Rules for assigning properties to activities: inputs, outputs, task, resources, attributes Task definition (task type, duration, schedule, capacity) Defining inputs to activities (starting point, collecting transactions at input) Transaction generators, types and ways of defining Resources, definition (classification, costs, schedule, overtime, costs, availability, attributes), assignment to tasks (type, origin, assignment method, constraint, waiting options, affinity) Tasks, types (work, delay, subprocess, concurrent process), costs (value class), overtime performance Attributes, defining (location, type, value, name), determining the value Defining decision-making activities Defining the simulation environment Scenario building rules Running a simulation experiment Analysis of the results. Implementation based on the model description of a simple queuing system Implementation of an individual project of a complex queuing system		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	50.0%	50.0%
	Practical exercises	50.0%	50.0%
Recommended reading	Basic literature	Filipowicz B.: Modele stochastyczne w badaniach operacyjnych. WNT, Warszawa 1996 Grajewski P.: Organizacja procesowa, PWE, Warszawa 2007 Mielczarek B.: Modelowanie symulacyjne w zarządzaniu. Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2009 Dokumentacja programu iGrafx Process 2013, dostępna w Internecie	
	Supplementary literature	Adair C.B., Murray B.A.: Radykalna reorganizacja firmy. Wydawnictwo Naukowe PWN, Warszawa 2002 Champy J.: X-engineering przedsiębiorstwa. Wydawnictwo Placet, Warszawa 2003 Hammer M.: Reinżynieria i jej następstwa. Wydawnictwo Naukowe PWN, Warszawa 1999 Tyszer J., Symulacja cyfrowa, WNT, Warszawa 1978	
	eResources addresses	Adresy na platformie eNauczanie:	
	Example issues/ example questions/ tasks being completed	Build a simulation model of the selected proces Carry out a simulation experiment Interpret the results and make improvements to the proces	
Work placement	Not applicable		

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