

SYLLABUS

Teacher					
Course	Design of processes and logistics systems				
Module	Compulsory subjects	ECTS	4	Course code	23SM.P.L.A.13.1

Field of study	Major	Academic year	
LOGISTICS	Industrial Systems Engineering	2023/2024	
Semester	SECOND	Year of studies	FIRST

Type of studies	Full-time				Extramural			
Type of classes	Lecture	Exercise	Laboratory	Project	Lecture	Exercise	Laboratory	Project
Amount of hours	25	14	16					
TOTAL	55							

Course objectives	To teach the student: a basic knowledge in the area of graphic process modelling methods and skills in the field of analysis and improvement of processes in logistics systems
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Minimum knowledge required from the student before the classes beginning	basic computer skills and basic skill about using software to create business graphics (charts and diagrams)
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Recommended literature to study before the classes beginning	Slack N., Brandon-Jones A., Operations and Process Management, Pearson, 2019
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LEARNING OUTCOMES			KEK	METHODS OF ASSESSMENT	
KNOWLEDGE	K01	The student has basic knowledge in the field of process mapping in logistics systems	K2_W01_L_P	EM8	Written colloquium with open questions
	K02	The student has expanded knowledge in the field of mapping and modelling of logistics systems using the IDEF0 and BPMN methods	K2_W05_L_P	EM15	Evaluation of activity in the classroom
	K03	The student has basic knowledge in the field of analysis and process improvement in logistics systems	K2_W10_L_P	EM15	Evaluation of activity in the classroom
	K04				
	K05				
SKILLS	S01	The student has the basic skills to develop models and maps of logistics processes	K2_U04_L_P	EM10	Project evaluation
	S02	The student has the skills to use in practice the method of mapping the system functions - IDEF0	K2_U05_L_P	EM15	Evaluation of activity in the classroom
	S03	The student has the ability to practical use of BPMN graphic modelling language to develop process models	K2_U05_L_P	EM15	Evaluation of activity in the classroom
	S04				
	S05				
SOCIAL COMPETENCE	SC01	The student has basic competences in the area of cooperation within the project team	K2_K01_L_P;K2_K05_L_P	EM16	Evaluation of the work, cooperation of students in the classroom (verification of the acquired social
	SC02				
	SC03				
	SC04				

Lecture	<ol style="list-style-type: none"> Basics of process modelling, IDEF0 method, ICOM Box definition, description of input, output, control and mechanism, the principle of building structural top-down models, rules for using the IDEF0 language, BPMN method, description of activity symbols, states, logic gates, flows and artefacts. The principle of modelling the organizational environment,
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Course contents	Exercises	Tutorial 1 - IDEF0 Model "Feeding a family" Tutorial 2 - BPMN Development of a system model based on verbal description, Tutorial 3 - BPMN Development of a process model based on existing documentation Tutorial 4 - BPMN Model "Logistic order management"
	Laboratories	Project 1 - Developing a map of any logistics process using the IDEF0 method (using any computer tool for drawing diagrams). Project 2 - Developing a model of any logistics process using BPMN (using any computer tool for drawing diagrams)
	Projects	

Teaching methods	TM2	Informational lecture using multimedia techniques
	TM16	Laboratories – task and problem solving

Obligatory literature	1	Dumas M., La Rosa M., Mendling J., Reijers H.A., Fundamentals of Business Process Management, Springer, 2018
	2	Chase R.B., Jacobs F.R., Aquilano N.J., Operations and Supply Chain Management, McGraw-Hill Education, 2020
	3	Weske M., Business Process Management: Concepts, Languages, Architectures, Springer, 2019

Additional literature	1	Hopp W.J., Spearman M.L., Factory Physics, Waveland Press, 2019
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Requirements to pass the course	
Completing the lecture and laboratory. Lecture - final test (minimum grade 3), Laboratory - 2 graphic projects of the map and model with the support of IDEF0 and BPMN methods (average grade for projects - minimum 3) + minimum 70% attendance	