THE INTERNATIONAL UNIVERSITY OF LOGISTICS AND TRANSPORT IN WROCLAW

SYLLABUS

Teacher					
Course	Warehouse and distribution systems				
Module	Compulsory subjects	ECTS	5	Course code	23SM.P.L.A.21.1

Major	Speciality	Academic year	
Logistics	Industrial systems engineering	2023/2024	
Semester	FOURTH	Year of studies	SECOND

Type of studies	Full-time				Extramural			
Type of classes	Lecture	Exercise	Laboratories	Project	Lecture	Exercise	Laboratories	Project
Amount of hours	30	14	16					
TOTAL	60							

Course objectives	The internal process flow of material, storage strategies, material handling equipment, dynamic algorithms, transportation modes, pick methods, and yard operations will be discussed

Minimum knowledge required from the student before the classes beginning
none

Recommended literature to study before the classes beginning
Rushton A., Croucher P., Baker P., The Handbook of Logistics and Distribution Management, Kogan Page, 2022

LEARNING OUTCOMES			KEK	METHODS OF ASSESSMENT	
KNOWLEDGE	K01	Ability to do basic calculations on input, throughput and output of warehouses	K2_W01_L_P	EM11	reports evaluation, case study
	K02	Understand theory basic (inventory, warehouses, distribution)	K2_W06_L_P	EM13	student presentations
	K03	Understand warehouse planning challenges	K2_W06_L_P	EM15	evaluation of activity in the classroom
	K04	Ability to detect optimization problems in intra logistic and inventory management	K2_W08_L_P	EM11	reports evaluation, case study
	K05	Understand main concepts in inventory management, warehouse management,	K2_W06_L_P	EM13	student presentations
SKILLS	S01	Recognize the main functions of warehouses, types of warehouses	K2_U01_L_P	EM1	oral examination
	S02	Analyse and optimize warehouse and distribution processes	K2_U09_L_P	EM14	continuous assessment
	S03	Application of the selected inventory classification in practice	K2_U07_L_P	EM11	reports evaluation, case study
	S04	Applying appropriate inventory management strategies to a given group of materials	K2_U02_L_P	EM14	continuous assessment
	S05	Preparation of the conditions of storage and distribution process	K2_U03_L_P	EM14	continuous assessment
	SC01	The student is aware of the importance of knowledge in solving warehousing problems,	K2_K02_L_P	EM16	evaluation of the work, co-operation of students in the classroom (verification of the acquired social competences)
	SC02	The student knows examples of distribution systems and understands differences between all types	K2_K05_L_P	EM15	evaluation of activity in the classroom

SOCIAL COMPETENCE	**SC03**	**The Student knows the essences of general inventory management strategies – pull and push; basic definitions of service level, safety stock, economic order quantity – EOQ, reorder point system – ROP and Fixed order interval system – FOI; ABC/XYZ classification methods and the other.**	K2_K01_L_P	**EM16**	evaluation of the work, co-operation of students in the classroom (verification of the acquired social competences)
	SC04	**The student knows examples of Warehouse documentation and understand differences between them.**	K2_K01_L_P	**EM16**	evaluation of the work, co-operation of students in the classroom (verification of the acquired social competences)

Course contents	Lecture	input, throughput and output of warehouses, warehouse and inventory planning, distribution management
	Exercises	Calculation of parameters in inventory and warehouse management, case studies, test
	Laboratories	SAP Transaction using in WH management
	Projects	presentation on a given topic

Teaching methods	**TM5**	**Problem lecture**
	TM8	**Projects method**

Obligatory literature	1	Gu J., Goetschalckx M., McGinnis L.F., Research on Warehouse Operation: A Comprehensive Review, European Journal of Operational Research, Elsevier, 2019
	2	Richards G., Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse, Kogan Page, 2018
	3	Bartholdi J.J., Hackman S.T., Warehouse & Distribution Science, The Supply Chain and Logistics Institute, 2019

Additional literature	1	Baker P., Canessa M., Warehouse Design: A Structured Approach, European Journal of Operational Research, Elsevier, 2018
	2	Emmett S., Excellence in Warehouse Management, Wiley, 2018
	3	Tompkins J.A., White J.A., Bozer Y.A., Tanchoco J.M.A., Facilities Planning, Wiley, 2019

Requirements to pass the course
>50 % presence, active participation in classes, tests and case studies, the presentation