THE INTERNATIONAL UNIVERSITY OF LOGISTICS AND TRANSPORT IN WROCLAW

SYLLABUS

Teacher					
Course	Management and optimization of production				
Module	Optional course	ECTS	3	Course code	23SM.P.L.B.IEP.4.1

Major	Speciality	Academic year
LOGISTICS	Industrial systems engineering	2023/2024
Semester	Third	Year of studies	Second

Type of studies	Full-time				Extramural			
Type of classes	Lecture	Exercise	Laboratories	Project	Lecture	Exercise	Laboratories	Project
Amount of hours	16	8	10					
TOTAL	34							

Course objectives	This course deals with Operations Management in both manufacturing and service organizations. It covers methods and tools used in production management such as forecasting, aggregate planning, master scheduling, flow shop and job shop scheduling, and inventory management.

Minimum knowledge required from the student before the classes beginning
Basics in Linear Programming

Recommended literature to study before the classes beginning

LEARNING OUTCOMES			KEK	METHODS OF ASSESSMENT	
KNOWLEDGE	K01	Define Operations and Process Management	K2_W10_L_P	EM14	Continuous assessment
	K02	Briefly describe averaging, trend and seasonality forecasting techniques	K2_W05_L_P	EM11	Reports evaluation
	K03	Describe some of the strategies that can be used for meeting uneven demand.	K2_W02_L_P	EM11	Reports evaluation
	K04	Describe some of the graphical and quantitative techniques production planners use	K2_W10_L_P	EM11	Reports evaluation
	K05	Describe the EOQ model with and without discount schedule	K2_W10_L_P	EM11	Reports evaluation
	K06				
SKILLS	S01	Solve typical Forecasting problems and computer accuracy measures	K2_U01_L_P	EM13	Papers, term papers etc. Evaluation
	S02	Establish and use control charts to monitor forecasts	K2_U04_L_P	EM13	Papers, term papers etc. Evaluation
	S03	Prepare aggregate plans and compute/minimize their costs	K2_U09_L_P	EM10	project evaluation
SOCIAL COMPETENCE	SC01	Establish priorities in solving conflicts due to limited resources	K2_K01_L_P	EM16	Evaluation of the work, co-operation of students in the classroom (verification of the acquired social competences)

	Lecture	I. Introduction to Operations Management II. Forecasting III. Aggregate planning and Master scheduling IV. Line balancing and job shop scheduling V. Inventory Management

Course contents	Exercises	I. Forecasting II. Aggregate planning and Master scheduling III. Line balancing and job shop scheduling IV. Inventory Management
	Laboratories	I. Forecasting II. Aggregate planning and Master scheduling
	Projects	

Teaching methods	**TM1**	**Informational lecture**
	TM10	**Case studies**
	TM12	**Role play game**

Obligatory literature	1	Stevenson W.J., Operations Management, McGraw-Hill Education, 2021
	2	Slack N., Brandon-Jones A., Operations and Process Management, Pearson, 2019
	3	

Additional literature	1	Bicheno J., Holweg M., The Lean Toolbox, Picsie Books, 2019
	2	
	3	

Requirements to pass the course
Written examination with practical tasks (computational or drawing tasks)