THE INTERNATIONAL UNIVERSITY OF LOGISTICS AND TRANSPORT IN WROCLAW

SYLLABUS

Teacher					
Course	Quality and Maintenance Management in logistics systems				
Module	Optional course	ECTS	3	Course code	23SM.P.L.B.IEP.2.1

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	The objectives of the course: quality and maintenance problems using modelling tools and control policies. Identifying different optimization methods of quality and maintenance management

Minimum knowledge required from the student before the classes beginning
Knowledge of mathematical tools for engineers and industrial management

Recommended literature to study before the classes beginning

LEARNING OUTCOMES			KEK	METHODS OF ASSESSMENT	
KNOWLEDGE	K01	Know the definition of reliability and the factors associated with it.	K2_W04_L_P	EM4	Written examination with open questions
	K02	Understand the concepts of Reliability, Availability and Maintainability Engineering	K2_W05_L_P	EM4	Written examination with open questions
	K03	Know the techniques for Reliability analysis	K2_W01_L_P	EM4	Written examination with open questions
	K04	Calculate the failure rate under different conditions	K2_W07_L_P	EM4	Written examination with open questions
	K05	Understand the failure and reliability curves as a factor of time.	K2_W01_L_P	EM4	Written examination with open questions
SKILLS	S01	Optimization strategies of maintenance	K2_U05_L_P	EM15	Evaluation of activity in the classroom
	S02	Student gather the strategy to solve an industrial problem	K2_U14_L_P	EM15	Evaluation of activity in the classroom
	S03	Write and define a mathematical model	K2_U04_L_P	EM15	Evaluation of activity in the classroom
	S04				
	S05				
SOCIAL COMPETENCE	SC01	Student gather the basic knowledge in the area of team working	K2_K05_L_P	EM15	Evaluation of activity in the classroom
	SC02				
	SC03				
	SC04				

	Lecture	Part I: Basic Reliability, Maintainability, Availability Terms Part II: Analytical Functions In Reliability Engineering Part III. Reliability of a system and structures Part IV. Estimation of the Reliability function of the systems Part V. maintenance optimization methods

Course contents	Exercises	reliability and maintenance problem (Exercise about : reliability, availability and maintenance optimization of industrial firms, distribution organisation)
	Laboratories	
	Projects	

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

Obligatory literature	1	Goetsch D.L., Davis S.B., Quality Management for Organizational Excellence: Introduction to Total Quality, Pearson, 2021
	2	Mobley R.K., Maintenance Engineering Handbook, McGraw-Hill Education, 2021
	3	Smith R., Hawkins B., Lean Maintenance: Reduce Costs, Improve Quality, and Increase Market Share, Elsevier, 2020

Additional literature	1	Oakland J.S., Total Quality Management and Operational Excellence: Text with Cases, Routledge, 2019
	2	
	3	

Requirements to pass the course
1-Class attendance. Each student is entitled to one unexcused absence. Acceptable late to class 15 minutes - after this time the student will not be allowed into the class. 2-Reports performed during classes. 3-Active participation and cooperation with the teacher 4- All students must request to proposed final exam. Each response will be scored 0 - 10 points. 5- Active participation and cooperation with the teacher is demanded.