International University of Logistics and Transport in Wrocław

Leading					
Item	**Mathematics**				
Module	**O**	**ECTS points**	**5**	**Reference number of the study program**	**L/2024/SPS/S/P - L/2024/SPS/N/P**

Direction	**Specialty**	**Academic year**
LOGISTICS	**Trade and distribution logistics/ Transport safety**	updated syllabus
Term	AND	**Year of study** AND

Form of studies	**Stationary**				**Part-time**			
Form of classes	**Lecture**	**Exercises**	**Laboratories**	**Design**	**Lecture**	**Exercises**	**Laboratories**	**Design**
Number of hours	**20**	**30**			**18**	**30**		
TOGETHER	**50**				**48**			

Objective of the course	**Providing basic knowledge and skills in the field of mathematical methods, necessary at the later stages of studies and in professional work.**

Minimum knowledge required from the student before starting classes

The scope of mathematics material (basic level) from secondary school.

Recommended literature to study before starting classes

lack

SUBJECT-SPECIFIC LEARNING OUTCOMES (SLE)			**KEU**	**EVALUATION METHODS**	
	CODE	**FORM**	**CODE**	**CODE**	**FORM**
KNOWLEDGE	**W01**	Basic knowledge of mathematics and statistics, necessary to formulate and solve simple logistics tasks.	**K1_W05_L_P**	**MO5**	Written exam in the form of practical tasks (computationa
	W02	Possesses basic knowledge of data acquisition methods, tools and techniques as well as the principles of proper application of scientific achievements, including computer techniques and information systems used in logistics.	**K1_W03_L_P**	**MO5**	Written exam in the form of practical tasks (computationa
SKILLS	**U01**	They can correctly interpret phenomena and processes occurring within the enterprise and its environment. They can forecast the practical consequences of specific social processes and phenomena using standard methods and tools from scientific disciplines relevant to logistics.	**K1_U01_L_P**	**MO5**	Written exam in the form of practical tasks (computationa l or problem-solving tasks)
	U02	Is able to use basic mathematical tools (including probabilistic ones) to describe logistic problems; is able to apply modern computer and digital technologies to organize planning, forecasting, and to analyze and evaluate processes, systems, and logistic projects.	**K1_U04_L_P**	**MO15**	Assessment of activity during classes
	U03	Able to analyze and evaluate the quality, safety, and effectiveness of undertaken activities. Able to conduct economic analysis and evaluation of logistics projects.	**K1_U06_L_P**	**MO15**	Assessment of activity during classes
SOCIAL COMPETENCES	**K01**	Is ready to set priorities appropriately in order to complete tasks assigned to himself or others.	**K1_K01_L_P**	**MO16**	Assessment of students' work and cooperation during classes (observation to check

Subject content	Lecture	1. Operations on sets and intervals. 2. Methods for solving systems of equations. 3. Introduction to operations on matrices. 4. Functions. 5. Elements of combinatorics and probability theory. 6. Applications of mathematical operations in public choice theory. 7. Elements of financial mathematics.
	Exercises	1. Operations on sets and intervals. 2. Methods for solving systems of equations. 3. Introduction to operations on matrices. 4. Functions. 5. Elements of combinatorics and probability theory. 6. Applications of mathematical operations in public choice theory. 7. Elements of financial mathematics.
	Laboratories	lack
	Projects	lack

	CODE	**FORM**
Teaching methods	**MD2**	**Informative lecture using multimedia techniques**
	MD16	**Exercises – solving tasks and problems**

Compulsory literature	**1**	Boaler J. MunsonJ. Williams C. 2018: Mindset Mathematics: Visualizing and Investigating Big Ideas, Grade, Wydawnictwo Jossey-Bass, Londyn
	2	Byrd L. Byrd G. Pearce. C. 2021: Cambridge Lower Secondary Mathematics Learners Book, Wydawnictwo Cambridge University Press, Londyn
Additional literature	**1**	Trevor J. 2017: Edexcel International GCSE (9-1) Mathematics Practice Book Third Edition, Wydawnictwo Hodder Education, Londyn
	2	Pimentel R. 2023: Cambridge IGCSE Core and Extended Mathematics Fifth edition, Wydawnictwo Hodder Education, Londyn

Conditions for passing the course
The final grade consists of the grade from the lecture (exam) - 40% and the grade from the exercises (activity) - 60%.