



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Mathematics

Course

Field of study

Logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

15

Tutorials

30

Laboratory classes

Projects/seminars

Other (e.g. online)

Number of credit points

4

Lecturers

Responsible for the course/lecturer:

Ph.D., Grzegorz Grzegorzczak

Responsible for the course/lecturer:

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Faculty of Control, Robotics and Electrical
Engineering

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Prerequisites



The basic knowledge obtained in the first semester. The ability to think logically. The ability to describe simple mathematical problems.

Course objective

The acquisition and consolidation of examples of basic mathematical concepts and acquire the ability to use the mathematical apparatus

Course-related learning outcomes

Knowledge

1. Student knows the basic issues of mathematics and statistics in the study of the structure of economic and logistic phenomena [P6S_WG_04]

Skills

1. Student is able to use appropriate experimental and measurement techniques to solve a problem in mathematics and statistics, including computer simulation in the field of logistics and its detailed issues and supply chain management [P6S_UW_03]

2. Student is able to select appropriate tools and methods to solve a problem within mathematics and use them effectively [P6S_UO_02]

Social competences

1. Student is aware of initiating activities related to the formulation and transfer of information and cooperation in the society in the area of logistics [P6S_KO_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Knowledge acquired as part of the lecture is verified on the basis of a 90-minute "zero exam" on the 15th lecture. Students can also proceed to the exam during the exam session. Exam includes material from both semesters.

Tutorials: Skills acquired on tutorials are verified on the basis of two 75-minutes tests, which are realized on 7th and 14th meetings.

Programme content

Lecture: Integral calculus of functions of one variable: indefinite integral, definite integral, applications of definite integral, improper integral and numerical series. Ordinary differential equations - introduction.

Tutorials:

Teaching methods

Lecture: oral presentation with examples and formulas, which are presented using a visualizer.

Tutorials: presentation of exemplary tasks on the blackboard and individual solving of similar examples by students - practical exercises.



Bibliography

Basic

1. Foltyńska I., Szafrąński Z., Ratajczak Z., Matematyka, część I i II, Wydawnictwo Politechniki Poznańskiej, Poznań 2004.

Additional

1. Kryszcki W., Włodarski L., Analiza matematyczna w zadaniach 1, Wydawnictwo Naukowe PWN, Warszawa, 2013.

2. Leja F., Rachunek różniczkowy i całkowy, Państwowe Wydawnictwo Naukowe, Warszawa, 1978.

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	47	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	53	2,0

¹ delete or add other activities as appropriate