



VILNIAUS
KOLEGIJA

VILNIAUS KOLEGIJA/UNIVERSITY OF APPLIED SCIENCES

STUDY SUBJECT/MODULE PROGRAMME (SSMP)

Entitlement

Applied Mathematics, 5 ECTS

Prerequisites

B1 level of English language

Main aim

To provide knowledge and develop abilities for modelling and solving mathematical tasks and problems of real content, developing and educating skills necessary for analysing environmental impact for the development of business entity and efficient adjustment in a multicultural environment.

Summary

Students are acquainted with fundamentals of mathematical analysis and financial calculations, linear algebra and probability theory: the main classical theory of sets and functions, linear algebra concepts, properties, the basis of probability theory and mathematical statistics, the economic problems of mathematical modelling techniques, mathematical concepts and practical examples of interpretation of the concept are used. Skills are developed to solve different types of problems; knowledge of theoretical mathematics is applied to solve economics and business problems.

Learning Outcomes

1.	Make decisions evaluating their impact on economic and cultural development of society, welfare and environment being aware of the importance of lifelong learning.
2.	Collect, systematize and analyse the economic information, using a range of methods of analysis.
3.	Analyse, forecast and assess variation and interconnection of economic processes.
4.	Simulate and solve optimization problems in economics and business.
5.	Apply mathematical methods in evaluating mathematical and very content situations.

Syllabus

1.	Mathematical calculations in economics
2.	Sets, operations with sets
3.	Function and sequence. Limit
4.	Derivative of a function and differential
5.	Event and probability. Experiment mathematical model
6.	Discrete random variables
7.	Elements of correlation theory

8.	Linear equations and their systems
9.	Matrices and determinants
10.	Linear inequalities and their systems
11.	Optimizing tasks

Evaluation procedure of knowledge and abilities

$FE = 0,2 \cdot X1 + 0,6 \cdot X2 + 0,2 \cdot X3$, as

FE – final evaluation;

X1 – work at class;

X2 – Colloquium,

X3 - Exam