

## DESCRIPTION OF A STUDY COURSE – SYLLABUS

<b>Title of a course</b>	<b>Economic Mathematics</b>				
<b>Study programme</b>	<b>Professional undergraduate study Entrepreneurship</b>				
<b>Status of a course</b>	Obligatory				
<b>Year of study</b>	1	<b>Semester (Winter/Summer)</b>	W	<b>ECTS credits</b>	6
<b>Goals of a course</b>					
Introduce students to the basic concepts of mathematical logic and analysis: functions of one variable, linear algebra and financial mathematics and prepare them for their practical application. Students should develop logical thinking and analytical way of solving problems.					
<b>Conditions for enrolling course</b>					
No conditions					
<b>Learning outcomes on a level of a study programme which includes course</b>					
Outcome 1: Apply appropriate methods and procedures in preparing information for business decisions. Outcome 3: Identify and evaluate key performance indicators of companies for management and decision making. Outcome 5: Design and substantiate an entrepreneurial idea through a business plan. Outcome 6: Create a plan for purchasing, sales and marketing activities. Outcome 7: Analyse and evaluate financial information.					
<b>Expected learning outcomes on a level of a course</b>					
1. Apply the basics of mathematical analysis to a single variable function. 2. Solve problems from the basics of financial mathematics. 3. Solve problems from the basics of linear algebra. 4. Explain concepts from the basics of mathematical analysis, the basics of financial mathematics and the basics of linear algebra.					
<b>Content of a course</b>					
Basic symbols of mathematical logic and theory of sets. Sets of numbers. Concept, way of setting functions and some of their features. Concept of a function domain. Classification of functions. Elementary functions. Graphical chart and characteristics of some elementary functions. Concept of series. Arithmetic and geometric series. Finite and infinite series. Limiting value series. Convergence and divergence. Equilibrium analysis in economy. Partial market analysis, linear and nonlinear model. General market equilibrium. Equilibrium in national income analysis. Proportionality. Average calculus. Percentage and promille calculi. Rule of three. Division calculus. Composition calculus. Recursive calculus. Interest calculus: simple and compound; discursive and anticipated. Nominal, relative and equivalent interest rate. Periodic payment and disbursement. Present and final value of periodic payment and disbursement. Loan. Fixed payment quota or fixed annuity, paying at the beginning and at the end of period. Loan conversion.					
<b>Teaching modes</b>	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
<b>Grading, evaluation and monitoring of students' work continuously during lectures and exams</b>					
Grading is based upon evaluation course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.					