

GENERAL INFORMATION		
Course coordinator	Phd Iva Mrša	
Course title	Mathematics	
Study programme	University undergraduate study programme Business Economics in Tourism and Hospitality	
Course status	Compulsory	
Year	1	
ECTS credits and form of instruction	ECTS credits	
	Number of hours (L+P+S)	30+15+15
COURSE DESCRIPTION		
1.1. Course objectives		
Introduce students to the basic concepts of calculus (analysis of functions), financial mathematics (principles and applications of interest and compounding) and linear algebra (matrices) and train them to recognize and apply these concepts in quantitative economic models. Encourage students to be independent, responsible and empathetic. To motivate students to independent active work, teamwork and public performance.		
1.2. Course enrolment requirements		
Knowledge from primary and secondary schooling.		
1.3. Expected course learning outcomes		
Students will be able to:		
<ol style="list-style-type: none"> Describe the main properties of the field of real numbers Analyze functions on the field of real numbers (increase and decrease, speed of change, extreme values) Apply derivatives and integrals to economic problems (profitability, elasticity of demand) Calculate present and future values of one or more investments Apply matrices to the systems of linear equations in economic practice 		
1.4. Course content		
<p>CALCULUS AND APPLICATIONS. (Real numbers and real functions of a real variable, limiting values of functions, derivation with applications, extreme function values, total and marginal cost, revenue and profit, indefinite integral, price elasticity coefficient.)</p> <p>FINANCIAL MATHEMATICS. (Simple and compound decursive interest calculation, present and future values of rents.)</p> <p>LINEAR ALGEBRA. (Matrices, vectors, ranks of matrices, systems of linear equations, determinants.)</p>		
1.5. Types of teaching (add an 'X')	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input checked="" type="checkbox"/> distance learning <input type="checkbox"/> fieldwork	<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratories <input checked="" type="checkbox"/> mentorship <input type="checkbox"/> other
1.6. Students' obligations		

Apart from calculation assignments in the classroom, students have the opportunity to complete project assignment.

1.7. Monitoring students' work

Course attendance	2	Activity / Participation	0,75	Seminar paper		Experimental work	
Written exam	1	Oral exam		Essay		Research	
Project	0,75	Continuous assessment	1,5	Report		Practice	
Portfolio							

1.8. Assessment and evaluation of student work during classes and at the final exam

Apart from the calculation tasks in class, the student is allowed to score points for presenting them to other students. Each explanation of the task in front of others carries a maximum of 2 points, and can be presented a maximum of 6 times. The student has the opportunity to solve the Project Task in the Merlin system, and the maximum number of points that student can achieve in this way is 12 points. Grading and evaluation of student work during classes and at the final exam is carried out based on the Regulations on Study and Studying at FMTU. A detailed executive curriculum is developed for each course, which harmonizes activities, student workload, learning outcomes and assessment methods.

1.9. Essential reading and the number of copies provided in relation to the current number of course participants

Title	Number of copies	Number of students
Materials authored by the course instructor, and posted on Merlin as part of the Mathematics course.	online	Number of students enrolled in the 1st year.

1.10. Additional reading

L. Neralić, B. Šego, "Matematika", Element, Zagreb, 2009.

K. Šorić, Zbirka zadataka iz matematika s primjenom u ekonomiji, Element, Zagreb, 2011.

1.11. Quality monitoring methods ensuring the acquisition of expected knowledge, skills and competencies

The quality of the program, the teaching process, the teaching skills and the level of the material acceptance will be established by means of a written evaluation of the extensive questionnaires and in other ways envisaged by the accepted standards, in accordance with the Rulebook on Quality Assurance and Improvement of the University of Rijeka and the Quality Assurance and Improvement of the Faculty of Tourism and Hospitality Management.