

### DESCRIPTION OF A STUDY COURSE – SYLLABUS

<b>Title of a course</b>	Applied Mathematics				
<b>Head of course</b>	MSc Mirta Mataija, Lecturer				
<b>Study programme</b>	Professional undergraduate study Sustainable Agritourism				
<b>Status of a course</b>	Obligatory				
<b>Year of study</b>	1.	<b>Semester</b>	I	<b>ECTS credits</b>	4
<b>Teaching plan (L + E + S+ Pr)</b>	1+0+3+0				
<b>Goals of a course</b>					
/					
<b>Conditions for enrolling course</b>					
No conditions					
<b>Learning outcomes on a level of a study programme which includes course</b>					
<p>Outcome 1: Explain the basic principles of chemistry, biochemistry, microbiology and botany required to work in the field of agriculture.</p> <p>Outcome 6: Apply the principles of spatial planning and design the interior and exterior according to the needs and capabilities of the agritourism farm and the location conditions.</p> <p>Outcome 10: Create entrepreneurial programs in agritourism.</p> <p>Outcome 12: Investigate market characteristics in rural tourism.</p> <p>Outcome 13: Analyse business performance and business documentation in agritourism within the framework of the legislation of the Republic of Croatia.</p>					
<b>Expected learning outcomes on a level of a course</b>					
<ol style="list-style-type: none"> <li>1. Apply the basics of mathematical analysis to a single variable function.</li> <li>2. Explain concepts from the basics of mathematical analysis.</li> <li>3. Solve problems from the basics of financial mathematics.</li> <li>4. Solve problems from the basics of business mathematics.</li> <li>5. Apply appropriate mathematical methods in preparing information for business decisions.</li> </ol>					
<b>Content of a course</b>					
<p>Numbers sets. Term, way of defining and some properties of a function. The term domain of a function. Classification of functions. Elementary function. Graphical representation and properties of certain elementary functions. Percentages and permille. Rule of three. Continued ratio. Compound proportion. Interest rate calculus: simple and compound; decursive and anticipative. Nominal, relative and effective interest rate. Periodic deposits and withdrawals. Current and final value of periodic deposits and withdrawals. Loan. Fixed payment quota or fixed annuity, payment at the end or at the end of the term. Conversion of loans.</p>					
<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>Comments</b>					
<b>Students' obligations</b>					
<b>Grading, evaluation and monitoring of students' work continuously during lectures and exams</b>					
Grading is based upon evaluation of 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.

**Continuous check-up:**

Outcomes	Written exam	Oral exam	Seminar work	Home assignment	Threshold	Max
Outcome 1	10	5			8	15
Outcome 2		15			8	15
Outcome 3	15			5	10	20
Outcome 4	15			5	10	20
Outcome 5		20	10		15	30
Percentage of ECTS	1,6	1,6	0,4	0,4		4
Total	40%	40%	10%	10%	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Exam term:**

Outcomes	Written exam	Oral exam	Max
Outcome 1	10	5	15
Outcome 2		15	15
Outcome 3	15	5	20
Outcome 4	15	5	20
Outcome 5	10	10	20
Percentage of ECTS	2	2	4
Total	50%	50%	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

**Grading:**

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good (4)	B
60,00 – 74,99	Good (3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

**Obligatory literature**

1. Štambuk Ljubica, Matematika sa statistikom, Veleučilište u Rijeci, Rijeka, 2005
2. Štambuk, Lj., Peranić, Z., Mataija, M., Matematika sa statistikom – Zbirka zadataka s riješenim primjerima, Veleučilište u Rijeci, Rijeka, 2006
3. Mataija, M., Gligora Marković, M., Rakamarić Šegić, M., Matematika – Zbirka ispitnih zadataka, Veleučilište u Rijeci, Rijeka, 2014.

**Additional literature**

1. Šorić K., Zbirka zadataka iz matematike sa primjenom u ekonomiji, Element, Zagreb, 1997.
2. Relić B., Gospodarska matematika, Hrvatska zajednica računovođa i financijskih djelatnika, Zagreb 2002.



