

<b>Study program:</b> Informatics			
<b>Course title:</b> Mathematics 1			
<b>Professor:</b> Olga D. Miljković			
<b>Type of course:</b> Compulsory			
<b>ECTS credits:</b> 6			
<b>Prerequisites:</b> none			
<b>Aims of the course:</b> To recognize and master logical thinking in the process of solving problems in professional and everyday life. To acquire well-known mathematical formalisms that can ease the process of solving multidisciplinary problems.			
<b>Learning outcomes:</b> After passing the exam the student will master logical thinking and adopt well-known mathematical formalisms that can be applied in solving specific problems at further level of studies.			
<b>Syllabus:</b> <ol style="list-style-type: none"> <li>1. Basic concepts of mathematical logics - statements, basic logical operations, tautology, application of mathematical logic in computing.</li> <li>2. Basics of the theory of sets - the definition of a set, concepts and set operations (association, distribution, commutativity, idempotency, De Morgan's laws)</li> <li>3. Algebraic structures and numbers - ring, field, numbers.</li> <li>4. Vector algebra and analytic geometry - operations with vectors, scalar, vector product, coordinates, projection of a vector, point, straight line, plane.</li> <li>5. Linear equations - Kramer's formula, Kronecker's theorem.</li> </ol>			
<b>Literature:</b> <ol style="list-style-type: none"> <li>1. O.Miljković, M. Lazić, Matematika za menadžere, Fakultet za inženjerski menadžment, Beograd, 2010</li> <li>2. Grupa autora, Matematika za više tehničke škole, Savremena administracija, Beograd, 1990</li> </ol>			
<b>Total number of active classes:</b> 75		<b>Lectures:</b> 45	<b>Practical classes:</b> 30
<b>Teaching methods:</b> Lectures, auditory and practical exercises.			
<b>Grading system (maximum 100 points)</b>			
grading scale from 5 to 10: below 51 points – student fails the exam, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.			
<b>Pre-exam obligations:</b>	<b>Points:</b>	<b>Final exam:</b>	<b>Points:</b>
Activity during theoretical lectures	max 5	Written exam	max 50
Practical training	max5		
Written test(s)	max 40		
Minimum requirement for the final exam	30		