

<b>Study program:</b> Informatics			
<b>Course title:</b> Statistics			
<b>Professor/assistant:</b> Slavica Đ. Šarenac			
<b>Type of course:</b> Compulsory			
<b>ECTS credits:</b> 6			
<b>Prerequisites:</b> None			
<b>Aims of the course:</b> Introduction to statistics, a branch of mathematics, which by means of numerical methods examines and analyzes social, economic and natural phenomena. It collects, arranges, groups and gives graphical presentation of data and discovers principles in them.			
<b>Learning outcomes:</b> After passing the subject, the student will be able to perform statistical and other calculations in Excel, discover crucial characteristics of the studied phenomena, see relations between them, causes and consequences of their state and changes, and to discover laws in phenomena and explain them.			
<b>Syllabus:</b> <i>Theoretical Lectures</i> <ol style="list-style-type: none"> <li>1. Introduction (concept, subject, development, division, importance, scope of application). Population and samples (statistical reasoning on the population; sample error). Statistical series (origin and types; series of structures, time series, graphic representation). Population and sample measures.</li> <li>2. Theoretical probability distribution (discrete and continuous random variable, binomial distribution, Poisson distribution, normal distribution, Student's t-distribution, matching of empirical and theoretical distribution).</li> <li>3. Theoretical basis of statistical reasoning on population parameters (sample statistics and their distribution; statistical estimate; confidence interval; statistical hypotheses).</li> <li>4. Statistical reasoning on population parameters based on a large sample</li> <li>5. Statistical process control (statistical stability of the process; control charts for numerical and attributive features).</li> <li>6. Analysis of time series (trend, general and moving environment).</li> <li>7. Contemporary statistical programs (relation of statistics and informatics).</li> </ol> <i>Practical Lessons</i> Practical exercises			
<b>Literature:</b> <ol style="list-style-type: none"> <li>1. Vuković N., Bulajić M., Osnove statistike, FON, Beograd 2014.</li> <li>2. Jovetić, S., Statistika sa aplikacijom u EXCEL, Dositej, Kragujevac, 2004.</li> <li>3. Mann S.P., Uvod u statistiku (srpsko izdanje), Centar za izdavačku delatnost Ekonomskog fakulteta, Beograd, 2009.</li> </ol>			
<b>Number of active classes:</b> 60		<b>Lectures:</b> 30	<b>Practical classes:</b> 30
<b>Teaching methods:</b> Lectures, practical exercises.			
<b>Grading system</b> (maximum 100 points) 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	Oral exam	50
Practical training	max 5		
Written test(s)	max 40		
Minimum requirement for the final exam	30		