

**Faculty of Philosophy / SOCIOLOGY / Statistics in Sociology**

<b>Course:</b>	Statistics in Sociology			
<b>Course ID</b>	<b>Course status</b>	<b>Semester</b>	<b>ECTS credits</b>	<b>Lessons</b> (Lessons+Exercises+Laboratory)
10134	Mandatory	1	5	2+2+0
<b>Programs</b>	SOCIOLOGY			
<b>Prerequisites</b>	No			
<b>Aims</b>	The main goal is to acquaint students with methods of statistical analysis and data processing, ability to solve tasks and use the acquired knowledge in research. Students will master the use of Excel for calculation and visualization of data, as well as obtained results.			
<b>Learning outcomes</b>	After a student passes this exam, they will be able to understand the concepts of sampling, statistical data analysis, and statistical inference. They will acquire concepts related to descriptive statistics, basic elements of counting and Probability, understand the concept of random variable, become familiar with the most commonly used random variable distributions and encounter point estimation of parameters.			
<b>Lecturer / Teaching assistant</b>	Biljana Stamatovic, full professor			
<b>Methodology</b>	Lectures, exercises, homework (case study), consultations, use of Excel and Data Analysis plugin.			
<b>Plan and program of work</b>				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction to Statistics			
I week exercises	Introduction to statistics. Refreshing knowledge of the elements of calculation (percentages, fractions, reading from graphs,...)			
II week lectures	Data and their grouping (frequency, relative frequency, cumulative frequency).			
II week exercises	Data and their grouping (frequency, relative frequency, cumulative frequency). Excel.			
III week lectures	Descriptive statistics. Measures of central tendency			
III week exercises	Descriptive statistics. Measures of central tendency (manual and Excel)			
IV week lectures	Descriptive statistics. Measures of variation and shape. Statistics.			
IV week exercises	Measures of variation and shape. Excel.			
V week lectures	Sets. Counting the set.			
V week exercises	Sets. Counting the set.			
VI week lectures	Exam			
VI week exercises	Exam			
VII week lectures	Probability. The Law of large numbers.			
VII week exercises	Probability. The Law of large numbers.			
VIII week lectures	Random variable and distribution function. Discrete random variable. Measurements of central tendency and variability.			
VIII week exercises	Random variable and distribution function. Discrete random variable. Measurements of central tendency and variability.			
IX week lectures	Binomial distribution.			
IX week exercises	Binomial distribution. Excel.			
X week lectures	Hypergeometric distribution. Geometric distribution.			
X week exercises	Hypergeometric distribution. Geometric distribution.			
XI week lectures	Poisson distribution.			
XI week exercises	Poisson distribution. Excel.			
XII week lectures	The density function of a continuous random variable. Uniform distribution.			
XII week exercises	The density function of a continuous random variable. Uniform distribution.			
XIII week lectures	Normal distribution. Standardized normal distribution. Use of statistical tables.			

XIII week exercises	Normal distribution. Standardized normal distribution. Use of statistical tables.					
XIV week lectures	Exponential distribution. Point estimation.					
XIV week exercises	Exponential distribution. Point estimation.					
XV week lectures	Exam.					
XV week exercises	Exam.					
<b>Student workload</b>	5					
<b>Per week</b>			<b>Per semester</b>			
<b>5 credits x 40/30=6 hours and 40 minuts</b> 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises <b>2 hour(s) i 40 minuts</b> of independent work, including consultations			Classes and final exam: <b>6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts</b> Necessary preparation before the beginning of the semester (administration, registration, certification): <b>6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts</b> Total workload for the subject: <b>5 x 30=150 hour(s)</b> Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) <b>30 hour(s) i 0 minuts</b> Workload structure: <b>106 hour(s) i 40 minuts (courses), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)</b>			
<b>Student obligations</b>			Mandatory attendance.			
<b>Consultations</b>			At the request of students.			
<b>Literature</b>			Boris Pec, Basic statistical methods for non-mathematicians J. Alan Weinstein, Applying Social Statistics, 2010 Mohamed A. Shaiib, Applied Statistics, 2013			
<b>Examination methods</b>			Homework - maximum 20 points Exam - maximum 30 points Final exam - maximum 45 points Attendance - maximum 5 points			
<b>Special remarks</b>			A passing grade is obtained if 51 points are accumulated cumulatively			
<b>Comment</b>			No.			
<b>Grade:</b>	F	E	D	C	B	A
<b>Number of points</b>	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points