## ECTS catalog with learning outcomes University of Montenegro

## Faculty of Philosophy / SOCIOLOGY / Statistics in Sociology

Course:	Statistics in Sociology							
Course ID	Course status	Semester	ECTS credits	<b>Lessons</b> (Lessons+Exer cises+Laboratory)				
10134	Mandatory	Mandatory 1 5 2+2+0						
Programs	SOCIOLOGY							
Prerequisites	Νο							
Aims	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.							
Learning outcomes	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.							
Lecturer / Teaching assistant	Biljana Stamatovic, full professor							
Methodology	Lectures, exercises, homework (case study), consultations, use of Excel and Data Analysis plugin.							
Plan and program of work								
Preparing week	Preparation and registration of the semester							
I week lectures	Introduction to Statistics							
l 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.							

## ECTS catalog with learning outcomes University of Montenegro

XIII week exe	ercises	Normal distribution. Standardized normal distribution. Use of statistical tables.							
XIV week led	tures	Exponential distribution. Point estimation.							
XIV week ex	ercises	Exponential distribution. Point estimation.							
XV week lect	tures	Exam.							
XV week exe	ercises	Exam.							
Student wo	orkload	5							
Per week			Per semester						
<ul> <li>5 credits x 40/30=6 hours and 40 minuts</li> <li>2 sat(a) theoretical classes</li> <li>0 sat(a) practical classes</li> <li>2 excercises</li> <li>2 hour(s) i 40 minuts</li> <li>of independent work, including consultations</li> </ul>			Classes and final exam: 6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts Total workload for the subject: 5 x 30=150 hour(s) 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) 30 hour(s) i 0 minuts Workload structure: 106 hour(s) i 40 minuts (cources), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)						
Student obligations			Mandatory attendance.						
Consultations			At the request of students.						
Literature			Boris Pec, Basic statistical methods for non-mathematicians J. Alan Weinstein, Applying Social Statistics, 2010 Mohamed A. Shaiib, Applied Statistics, 2013						
Examination methods			Homework - maximum 20 points Exam - maximum 30 points Final exam - maximum 45 points Attendance - maximum 5 points						
Special remarks			A passing grade is obtained if 51 points are accumulated cumulatively						
Comment			No.						
Grade:	F		E	D	С	В	А		
Number of points	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		