

COURSE NAME		STATISTICS			
Code	PMM011	Year of study	1st year of graduate study		
Course teacher	Snježana Braić	Credits (ECTS)	2		
Associate teachers		Type of instruction (number of hours)	L	S	E
			15		15
Status of the course	Compulsory	Percentage of application of e-learning	60%		
COURSE DESCRIPTION					
Course objectives	Ensure that, through selected topics, students acquire knowledge of basic notions, concepts and methods in statistics. The emphasis is on understanding, appropriate interpretation of data, and on performing a simple statistical analysis. The selected elements of statistical inference form a basis for further comprehension and application of more sophisticated statistical procedures. Students are instructed on how to use statistical software package "R".				
Course enrolment requirements and entry competences required for the course	Entry competences: elementary knowledge of calculus and operations with sets				
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	<p>Student should</p> <ul style="list-style-type: none"> - carry out a simple statistical data analysis; - interpret the output of a simple statistical data analysis; - recognize the most frequently used discrete and continuous probability distributions; - estimate different level confidence intervals of a population parameter; - comprehend the idea of statistical testing. 				
Course content broken down in detail by weekly class schedule (syllabus)	<ul style="list-style-type: none"> - Introduction. Descriptive statistics: graphical visualising of data, measuring center, spread, location and shape. (3 hours) - Sample space, classical and statistical definition of probability, probability space. Combinatorial rules. (2 hours) - Discrete random variable, probability distribution and (cumulative) distribution function; parameters. Bernoulli, binomial, (hyper)geometric and Poisson random variable. (3 hours) - Continuous random variable, probability density function and (cumulative) distribution function; parameters. Uniform, exponential, chi-square, normal and (Student's) <i>t</i>-distribution. (3 hours) - Two-dimensional random variable. (1 hour) - Estimation of parameters, confidence intervals. Statistical hypothesis testing. Parametric tests. (3 hours) 				
Format of instruction	Lectures, exercises.				
Student responsibilities	Attendance.				

Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Attending classes: 0,5 ECTS 2 written partial tests: 0,5 ECTS Final exam (written): 1 ECTS
Grading and evaluating student work in class and at the final exam	The exam which requires solving practical and theoretical problems is taken in written form and is followed by an oral theoretical exam. A passed written exam is a prerequisite for the oral exam. The written exam can be taken partialy, in two parts, during class. Final grade is derived as the arithmetic mean of scores in partial exams (or a written exam) and the oral exam.
Required literature (available in the library and via other media)	T. Vučićić, Lecture notes in the form of slides, Pdf file N. Koceić Bilan, <i>Primijenjena statistika</i> , skripta, PMF Split, 2012.
Optional literature (at the time of submission of study programme proposal)	D.S. Moore, G.P. McCabe, B.A. Craig, <i>Introduction to the Practice of Statistics</i> , 6th edition, W. H. Freeman and Co., N.Y., 2009
Quality assurance methods that ensure the acquisition of exit competences	Exam results statistics. Students' quality assessment at the end of the semester carried out by the University authorized committee through anonymous polls.
Other (as the proposer wishes to add)	