NAME OF THE COURSE	STATISTICS		
Code	EUA004	Year of study	1
Course teacher	PhD, Snježana Pivac, full professor PhD, Tea Šestanović, Assistant professor	Credits (ECTS)	6

Associate teachers	PhD, Tea Šestanović, assistant professor Marija Vuković, mag. oec. Karmen Vrhar, mag.oec. Nada Ratković, mag. oec.	Type of instruction (number of hours)	L	S	E	F
			26		26	

Status of the course	Mandatory	Percentage of application of e-learning	20%

COURSE DESCRIPTION

Course objectives	Understanding the importance of statistical methods in professional and scientific work. Independent processing and interpretation of data obtained through statistical research. Statistical way of thinking with probability theory. Ability to independently make conclusions in interval estimations and hypothesis testing.
Course enrolment requirements and entry competences required for the course	**Course signature requirements**: as determined by the Statute of the Faculty of Economics and Rules and Regulations for Studies and Study Programmes. **Entry competencies**: English language proficiency level B2-C1 (CEFR) and computer skills (Microsoft Office Package).
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Learning outcome of the subject: 1. To analyze and interpret the results of statistical research. Specific learning outcomes: 1. To identify basic statistical concepts. 2. To analyze the calculated indicators of the descriptive statistics in the population. 3. To identify the underlying concepts of probability theory and inferential statistics. 4. To estimate the parameters of the population using sampling method with one number and interval. 5. To make conclusions based on statistical hypotheses.

Course content broken down in detail by weekly class schedule (syllabus)

Lectures		Exercises	
Topic	Hours	Topic	Hours
The concept and the scope of statistics. Statistical population. Data collection.	1	The concept and the scope of statistics. Statistical population. Data collection.	1
Forming statistical series. Graphical presentation. Relative numbers.	2	Forming statistical series. Graphical representation. Relative numbers.	2
Measures of Central Tendency	2	Measures of Central Tendency	2
Measures of Variation.	1	Measures of Variation.	1
Moments of numerical series. Measures of skewness and kurtosis.	1	Moments of numerical series. Measures of skewness and kurtosis.	1

	Probability. Addition and multiplication theorem. Conditional probability.	1	Probability. Addition and multiplication theorem. Conditional probability.	1
	Discrete random variable. Theoretical distribution of discrete random variables.	2	Discrete random variable. Theoretical distribution of discrete random variables.	2
	Two-dimensional probability distribution. Marginal probability distribution.	2	Two-dimensional probability distribution. Marginal probability distribution.	2
	Continuous random variable. Theoretical distribution of continuous random variables.	2	Continuous random variable. Theoretical distribution of continuous random variables.	2
	Sample. Sample selection methods. Estimation of population mean.	2	Sample. Sample selection methods. Estimation of population mean.	2
	Estimation of population total. Estimation of population proportion. Estimation of population variance.	2	Estimation of population total. Estimation of population proportion. Estimation of population variance.	2
	Hypothesis testing about a population mean.	2	Hypothesis testing about a population mean.	2
	Hypothesis testing about the difference between two population means. Hypothesis testing about population proportion.	2	Hypothesis testing about the difference between two population means. Hypothesis testing about population proportion.	2
	Hypothesis testing about the difference between two population proportions. Chi-squared goodness of fit test.	2	Hypothesis testing about the difference between two population proportions. Chi-squared goodness of fit test.	2
	Chi-squared test for independence.	2	Chi-squared test for independence.	2

Format of instruction	☑**lectures** ☐ seminars and workshops ☑**exercises** ☐ *on line* in entirety ☑**partial e-learning** ☐ field work ☐ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☐ (other)
Student responsibilities	Students are required to actively participate in classes during lectures and exercises, with the attendance of minimum 50%. Additionally, students' activity will be monitored through self-evaluation quizzes that will be available to students on the course websites within the Moodle platform. In case the student takes less than two self-evaluation quizzes during the semester, the student will be denied a signature. The condition for taking the exam is a signature.

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)*	Class attendance	2	Research		Practical training	
	Experimental work		Report		Self-evaluation quizzes	0.5
	Essay		Seminar essay		(Other)	
	Tests	2*	Oral exam	1.5*	(Other)	
	Written exam	2*	Project		(Other)	

Grading and evaluating student	The exam consists of written and oral part. During the semester two tests will be organized. The condition for taking all the

work in class and at the final exam	tests is that the student has solved at least one of the self-evaluation quizzes from the part of the material that is evaluated by the test. The test is deemed to be passed if the student correctly and neatly solves and interprets at least 50% of the tasks. Additional condition for accessing the second test is the positively resolved first test. The total score on the written part of the exam is based on the sum of the scores obtained on both tests. Alternatively, students can pass the written exam during the exam period. * A student who achieves a positive grade from the first and second test, does not have to take the written exam. After successfully passing the written part one can undertake the oral part of the exam. The final grade is formed as the average score of the written and oral exam. Key points and appropriate grades for written exam: 0-49 inadequate (1) 50-62 sufficient (2) 63-75 good (3) 76-88 very good (4) 89-100 excellent (5)

Required literature (available in the library and via other media)	Title	Number of copies in the library	Availability via other media
	Rozga, A.: Statistika za ekonomiste, Ekonomski fakultet, Split, 2017.	10	
	Newbold P. et al.: Statistics for Business and Economics, 8th Ed., Pearson Education, Prentice Hall, Upper Saddle River, NY, 2013.	1	
	Teachers' handouts and other on-line materials for preparation of mid-term exams and final exams (available on the Mooodle).		Moodle

Optional literature (at the time of submission of study programme proposal)	- Vuković, M., Pivac, S., Does financial behavior mediate the relationship between self-control and financial security?, Croatian operational research review, 12 (2021), 1; pp 27-36. - Vuković, M., Pivac, S., Babić, Z., Comparative analysis of stock selection using a hybrid MCDM approach and modern portfolio theory, Croatian Review of Economic, Business and Social Statistics (CREBSS), 6 (2020), 2; pp 58-68. - Aljinovic Z., Pivac S., Skrabic Peric B., European Transition Countries' Risk Claccification and Ranking: Ten Years Later, Proceedings of the Twelfth International Conference: "Innovative Responses for Growth and Competitiveness", Bol, Croatia, May 2017. - Bahovec V. et al.: Statistika, Bahovec V., Erjavec N. (ur.), Zagreb: Element, 2015. - Petz, B.: Osnovne statističke metode za nematematičare. Naklada Slap. Jastrebarsko, 1997. - Serdar, V. i Šošić, I.: Uvod u statistiku. Školska knjiga. Zagreb, 2004. - Šošić, I.: Primijenjena statistika. Školska knjiga. Zagreb, 2004. - Croatian bureau of statistics (www.dzs.hr)

Quality assurance methods that ensure the acquisition of exit competences	- Monitoring obligations of students (teacher) - Control of Teaching (Vice-Dean) - Analysis of students' success in all subjects of study (Vice-Dean) - Student survey on the quality of teachers and teaching for each course of study (UNIST, Centre for Quality Improvement) - Exam administered by the subject teacher validates all the learning

	outcomes of the course. The contents of the exam are periodically reviewed. This revision is the basis for determining the adequacy of the ways of checking learning outcomes (Vice-Dean)
Other (as the proposer wishes to add)	