NAME OF THE COURSE	BUSINESS STATISTICS				
Code	ECA004	Year of study	1		
Course teacher	Prof.Elza Jurun Doc.dr.sc.Tea Šestanović	Credits (ECTS)	6		
Associate teachers	Nada Ratković mag.oec.	Type of instruction (number of hours)	L	S	E	F
			26		26	
Status of the course	Obligatory	Percentage of application of e-learning	40%		

COURSE DESCRIPTION

Course objectives	Students should be able to process independently the statistical database and interpret the results obtained especially in the field of business statistics.
Course enrolment requirements and entry competences required for the course	Course signature requirements are determined by the Statute of the Faculty of Economics in Split and Rules and Regulations for Studies and Study Programmes.
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	**Learning outcome of the subject**: The expected outcome of learning at the subject level is the training of students for the independently application of statistical methods and techniques and the interpretation of the obtained results. **Specific learning outcomes:** 1. To make and comment the aggregate and composite statistical table. 2.To make the diagram and graphically compare the numerical statistical series and time series. 3. To calculate and to analyze the results of linear correlation analysis. 4.To analyze simple linear and selected nonlinear regression models. 5. To analyze the time series by using individual and aggregative indices. 6. To analyze simple linear and selected nonlinear trend models.

Course content broken down in detail by weekly class schedule (syllabus)	Lectures		Exercises	
	Topic	Hours	Topic	Hours
	Concept and task of statistics, statistical set and characteristics of statistical units.	2	Distribution of frequencies and histograms	2
	Statistical data collection. Tabular and graphical presentation.	2	Tabular and graphical presentation of statistical series.	2
	Average values of numeric statistical series (complete and positional).	2	Average values of numeric statistical series (complete and positional).	2

Quartiles. Relative numbers. Numerical series indices.	1	Quartiles. Relative numbers. Numerical series indices.	1
Dispersion measures (absolute and relative).	2	Dispersion measures (absolute and relative).	2
Measures of skewness and kurtosis.	1	Measures of skewness and kurtosis. Descriptive statistics in «Data analysis»	1
Correlation analysis (linear correlation and rank correlation).	2	Correlation analysis (linear correlation and rank correlation).	2
Regression analysis - simple linear and exponential regression.	2	Regression analysis - simple linear and exponential regression.	2
Nonlinear regression analysis and Diagnostic.	2	Nonlinear regression analysis and diagnostics. «Trendline» and «Data analysis» rutine.	2
Time series (concept and graphical display).	1	Time series (concept and graphical display).	1
Individual indices (chain base and fixed base indices). Conversion of indices.	2	Individual indices (chain base and fixed base indices). Conversion of indices.	2
Aggregative indices (price, quantity and value). Selected special forms of aggregative indices.	2	Aggregative indices (price, quantity and value). Selected special forms of aggregative indices.	2
Measures of central tendency for time series.	1	Time series measures of central tendency. Rate of change.	1
Trend models and diagnostics.	2	Trend models and diagnostics. Prognostic modelling.	2
Asymptotic trend models.	2	Examples of exam assignments.	2

	☐ 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 attend min. 70% of the teaching and participate actively in it. This is the condition for obtaining the signature without which the student cannot access the written part of the exam. The written part of the exam is a prerequisite for accessing the oral part of the exam. Students are required to actively participate in classes. Students' activity will be monitored through self-evaluation tests that will be available to students on the course websites within the Moodle platform. 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 tests	0,5
	Essay		Seminar essay		(Other)	
	Tests	2*	Oral exam	1,5	(Other)	
	Written exam	**2***	Project		(Other)	

Grading and evaluating student work in class and at the final exam	The exam consists of written and oral part. During the semester two tests will be organized. The condition for taking all the tests is that the student has solved all the self-evaluation tests 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. The exam is deemed to be passed if the student correctly and neatly solves and interprets at least 50% of the tasks, provided that a minimum of 20 % from the total sum of points on the exam from each part of the material is achieved. * 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
	E.Jurun & N.Ratković : Poslovna statistika s primjerima u Microsoft Excelu, Ekonomski fakultet u Splitu, Split, 2017.	10	

	Teachers' handouts and other on-line materials for preparation of mid-term exams and final exams are available on the Mooodle		Moodle
Optional literature (at the time of submission of study programme proposal)	A.Čeh Časni et al. : Statistika, Element, Zagreb, 2018. Articles: E.Jurun, N.Ratković, & I.Matić : **Periodic Average National Reference Rate as a New Financial Standard**, Proceedings of the 14th International Symposium on Operational Research SOR'17, Bled, Slovenia, 2017. str.409-414. E.Jurun, B.Vuleta & N.Ratković, : **Statistical Analysis of the Public Opinion Survey on Free Sunday,** Proceedings of the 19th International Symposium on Operational Research SOR'19, Bled, Slovenia, 2019. str.326-332.		
Quality assurance methods that ensure the acquisition of exit competences	Registering students' attendance and success in carrying out of their duties (lecturer). Monitoring lectures and practice sessions (Vice Dean for Education). Students' Performance analysis in each course (Vice Dean for Education). Student questionnaire on the quality of lecturers and lessons for each course (University of Split, Quality Assurance Centre) Examination is used as an instrument to evaluate individual course outcomes by the course lecturer. The content of exam is reassessed periodically in order to assure compliance with the course outcomes.		
Other (as the proposer wishes to add)	The course is taught in Croatian.		