

Biotechnical Faculty / ANIMAL PRODUCTION / STATISTICS

Course:	STATISTICS			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
2853	Mandatory	1	5	2+2+0
Programs	ANIMAL PRODUCTION			
Prerequisites	None.			
Aims	Introduction to basic statistical tools used in agriculture.			
Learning outcomes	After successfully mastering the subject program, the student will be able to: identify types of data and characteristics, group quantitative data, determine appropriate graphical representation of data, determine measures of descriptive statistics and measures of variability, apply methods of parametric statistics.			
Lecturer / Teaching assistant	Teacher: Dr Andjela Mijanovic Teaching associate: Mr Velimir Corovic			
Methodology	Lectures and exercises.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction to statistics. Concepts of statistical set, population, sample, and statistical inference.			
I week exercises	Developing practical examples related to the theory covered in the first lecture.			
II week lectures	Measures of central tendency with examples from agriculture.			
II week exercises	Developing practical examples related to the theory covered in the second lecture.			
III week lectures	Measures of dispersion with examples from agriculture.			
III week exercises	Developing practical examples related to the theory covered in the third lecture.			
IV week lectures	Grouping and processing data. Sturges rule. Histogram.			
IV week exercises	Developing practical examples related to the theory covered in the fourth lecture.			
V week lectures	Z-variable and outlier data. Percentiles. Pie chart representation.			
V week exercises	Developing practical examples related to the theory covered in the fifth lecture.			
VI week lectures	Estimators - basic concepts.			
VI week exercises	Developing practical examples related to the theory covered in the sixth lecture.			
VII week lectures	Estimating the mean and estimating the error.			
VII week exercises	Developing practical examples related to the theory covered in the seventh lecture.			
VIII week lectures	Estimating the variance and standard deviation. Estimating the error.			
VIII week exercises	Developing practical examples related to the theory covered in the eighth lecture.			
IX week lectures	Preparation for the midterm and the midterm exam.			
IX week exercises	Midterm exam during the exercise session.			
X week lectures	Concept of statistical test and hypotheses. Basic concepts. Z and Students t-test for one sample.			
X week exercises	Developing practical examples related to the theory covered in the tenth lecture.			
XI week lectures	Z and Students t-test for two independent samples.			
XI week exercises	Developing practical examples related to the theory covered in the eleventh lecture.			
XII week lectures	Students t-test for two dependent samples.			
XII week exercises	Developing practical examples related to the theory covered in the twelfth lecture.			
XIII week lectures	Concept of correlation. Pearson correlation coefficient.			
XIII week exercises	Developing practical examples related to the theory covered in the thirteenth lecture.			
XIV week lectures	Chi-square test. Contingency tables.			
XIV week exercises	Developing practical examples related to the theory covered in the fourteenth lecture.			
XV week lectures	Chi-square test for the two samples.			

XV week exercises		Developing practical examples related to the theory covered in the fifteenth lecture.				
Student workload						
Per week		Per semester				
5 credits x 40/30=6 hours and 40 minuts 2 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises 2 hour(s) i 40 minuts of independent work, including consultations		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		Students are required to attend lectures, exercises, midterm exam, and final exam.				
Consultations		By agreement, one hour per week.				
Literature		1. Ivanković D, i sur. Osnove statističke analize za medicinare. Zagreb: Medicinski fakultet Sveučilišta u Zagrebu, ISBN 8680605182 9788680605180, 1988; 2. Statistics, R.J.Barlow, ISBN: 978-0-471-92295-7, 1993; 3. Vjerojatnost i statistika, skripta prof. dr Martin Lazar, 2011.				
Examination methods		Midterm exam 50 points, Final exam 50 points.				
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
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