

Study Programme: <i>ANIMAL SCIENCE</i>		
Course Unit Title: PRINCIPLES OF EXPERIMENTAL DESIGN IN ANIMALS SCIENCE		
Course Unit Code: 19MST1001		
Name of Lecturer(s): Prof. dr Snežana Trivunović; Prof. dr Dragan Žikić		
Type and Level of Studies: MASTER ACADEMIC STUDIES		
Course Status (compulsory/elective): compulsory/		
Semester (winter/summer): winter		
Language of instruction: Serbian		
Mode of course unit delivery (face-to-face/distance learning): both		
Number of ECTS Allocated: 6		
Prerequisites:		
Course Aims: To teach students the basic principles of defining scientific issues, designing and setting up experiments whose results should provide answers to questions, to control the flow of the experiment, yield results that reflect the conditions of the experiment, that the results adequately analyzed and that the proper way to make conclusions		
Learning Outcomes: Upon passing the exam can independently devise, shall control flows and analyze the results of the experiment, which will be applied during the preparation of master works		
Syllabus: <i>Theory</i> The reasons for the use of animals in research, care and use of farm animals in scientific research (accommodation, biosecurity, food, setting up experiments, euthanasia), ethics and the use of animals in scientific research. The link between planning experiments and statistics. The first steps in designing a good experiment (defining research questions, making a hypothesis; identification of key prerequisites for acceptance or rejection of the hypothesis), the importance of pilot studies, the objectives of good planned and developed experiments (elimination of random variation and factors which are not controlled, the reliability of the measurements, the importance of blanks and control, randomness, the importance of repetition, select the appropriate sample size). Different types of plans reflected (totally random plan experiments, random block plan, "change-over" experimental plans, factorial experiments, experiments with cages and law enforcement agencies, ...). Analyzing the results (descriptive statistics, hypothesis testing, analysis of variance experimental plans, simple linear regression and correlation, multiple regressions).. <i>Practice</i> Group and individual work on planning experiments with a set of parameters, a tour of the experimental farms, data collection and analysis using statistical software. Presentation of results..		
Required Reading: Morris, T. R. Experimental Design and Analysis in Animal Science, CAB International, Wallingford, Oxon, UK, 1999		
Weekly Contact Hours:	Lectures: 2	Practical work: 2
Teaching Methods: Verbal, interactive methods (CD presentations, quiz), individual and group work, preparing reports		
Knowledge Assessment (maximum of 100 points): 100		

Pre-exam obligations	points	Final exam	points
Active class participation	7	written exam	50
Practical work	3	oral exam	
Preliminary exam(s)		
Seminar(s)	40		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.