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| Course: | PRINCIPLES OF EXPERIMENTAL DESIGN IN ANIMALS SCIENCE |
| Course id: 3МSТ1О01 |
| Number of ECTS: 6 |
| Teacher: | Prof. dr Snežana Trivunović; Prof. dr Dragan Žikić |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

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. |
| 1. Educational 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. |
| 1. Course content

Theoretical lessons: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 pstavljenog and developed experiments (elimination of random variation and fakotra 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 regression).Practical lessons: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. |
| 1. Teaching methods

Verbal, interactive methods (CD presentations, quiz), individual and group work, preparing reports |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Lecture attendance | Yes | 7 |  *Oral part of the exam-tasks and theory* | Yes | 50 |
| Test | No |  |  |
| Exercise attendance | Yes | 3 |
| Seminar work | Yes | 40 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Klarik, G., Škrtić, Z., Kralik, Z | Biometrika u zootehnici | Poljoprivredni fakultet u Osijeku, Sveučilište J.J. Strossmayera u Osijeku,  | 2012 |
|  | Kaps, M,W R. Lamberson: | Biostatistika i metode istraživanja na životinjama. | Sveučilište u Zagrebu | 2005 |
|  | Morris, T. R. | Experimental Design and Analysis in Animal Science | CAB International, Wallingford, Oxon, UK | 1999 |
|  | CCAC | CCAC guidelines on: the care and use of farm animals in research, teaching and testing | Canadian Council on Animal Care | 2009 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationMASTER ACADEMIC STUDIES ANIMAL SCIENCE |
| Table 5.2 Course specification |