SYLLABUS

1. Course title:

SELECTION AND IMPROVEMENT IN ANIMAL HUSBANDRY

2. Code:

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course:

◉ Mandatory   ○ Elective

6. Prerequisites:

No prerequisites

7. Class restrictions:

No class restriction

8. Duration / semester:

1   6

9. Weekly contact hours:

9.1. Lectures: | 3

9.2. Seminars: | 0

9.3. Laboratory/Practice classes: | 2

10. Faculty:

Faculty of Technology

11. Department/study program:

Agronomy

12. Lecturer:

13. Lecturer's e-mail:

14. Web site:

www.tf.untz.ba

15. Course aims:

Acquisition of knowledge and understanding of methods of breeding, selection and improvement of domestic and domestic animals, estimation of fertility values, knowledge of improvement principles of different species, breeds and hybrids of domestic and cultured animals through knowledge of population genetics, further training and linking of basic knowledge, critical thinking, and development of capabilities that will enable the application of the achieved results in practice.

16. Learning outcomes:

At the end of the semester/course, successful students, who have been continuously carrying out their duties during the entire teaching period, will be trained to:
1. Explain the principles of selection of one and more properties with the distinct additive inheritance component as well as the terms of the selection result, selection intensity, selection differential, generational interval, breeding value;
2. Know to distinguish the effects of heterosis and inbriding on breeding and selection of domestic animals;
3. Be aware of the specificities of selection organization in dairy cattle breeding and sheep farming and poultry and pig breeding.

17. Course content:

Reasons for improvement of domestic animals; Selection Theory (Selection Score, Selection Intensity, Selection Difference, Generational Interval); Coefficients of kinship and inbriding (definitions, calculations); Inbriding depression (definition, excerpt, consequences); Heterosis (definition, excerpt, consequences); Cross-breeding - the use of non-adventitious genetic effects (definitions, calculations, concepts); Growth value (concept and definition of breeding value and calculation methods). Basics of improvement for dairy cattle; Basics of improvement for dairy sheep; Basics of improvement for pigs; Basics of improvement for poultry; Basic principles, significance and role of cloning and genetic engineering in cattle breeding with the ethical aspects of the application of these methods.

18. Learning methods:

The methods of learning in the subject are:
- Lectures with the use of multimedia resources, active learning techniques and with active participation and discussion of students;
- Field exercises

19. Assessment methods:

After half of the semester (in the 8th week), students take the writing test, which includes previously treated topics from lectures and exercises. The student can achieve a maximum of 20 points on the first test. In the 13th week of the semester, students take the writing test, which includes previously treated topics from lectures from the second semester. The student can achieve a maximum of 20 points on the second test. All students take both tests on the subject at the same time, thereby achieving uniformity of the level of knowledge that is being tested, as well as the conditions under which the student takes the exam. For a continuous activity in lectures throughout the semester, the student can achieve 0 to 10 points.

The final exam is written or oral. All students have the right to take the final exam. The maximum number of points a student can achieve on the final exam is 50. The minimum number of points on the final exam is 25.

Checks on all forms of knowledge are recognized as a cumulative test if the result is positive after each individual check and is at least 50% of the total of the predicted and / or required knowledge and skills.

In order to pass the course, a student must have at least 54 cumulative points of which at least 25 points on the final exam.

20. Assessment components:

The assessment of the exam is based on the total number of points the student has obtained by fulfilling the pre-requisites and passing the exam and is determined according to the following scale:

Student obligations	Points
Presence and activity at classess	10
Test I	20
Test II	20
Final Exam	50
Total	100

21. Required reading list:

1. Vidović V. Principi i metodi oplemenjivanja životinja. Novi Sad. 1993.
3. Stanković M. Osnovi genetike i oplemenjivanje domaćih životinja. Beograd. 1994.

22. Web sources:

23. Applicable starting from the academic year:

2016/2017

24. Adopted in the Faculty/Academy session: