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| Course: Animal Production | *Genetics and Biotechnology in Animal Husbandry* |
| Course id: 3МСТ1I11 |
| Number of ECTS: 6 |
| Teacher: | Snežana Trivunović, PhD, associate professorDragomir Lukač, MSc, teaching assistant |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 30 | Practical classes: 30 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

Education and training of students for the application of genetics and biotechnology in professional and scientific work in the field of basic branches of livestock production, production of fish, wildlife, furry animals, bees and ornamental animals. After passing the exam, students should be able to easily, efficiently competently implement the principles of genetics and biotechnology in practical and scientific research. |
| 1. Educational outcomes

A student who has significantly broadened and deepened knowledge in the field of genetics and biotechnology in animal husbandry, in relation to the knowledge acquired at the undergraduate level and that is the basis for originality in developing and / or applying ideas and knowledge necessary for understanding the scientific basis, often in context of research in the field of basic and alternative branches of livestock production. After passing the exam, the student has the ability for independent and group research with the ability to plan and conduct experiments, as well as the ability to scientifically based interpretation of experimental data. |
| 1. Course content

*Lectures*The genome of the animal and its structure. Sequencing the genome. Mapping. DNA, RNA, proteins and mitochondria. Genetic engineering. Knowledge of the genome in prevention of health function. Genetic engineering in animal breeding. *Practical classes*Mapping and sequencing of the genome. Genetic engineering in animal breeding and production of medicines. |
| 1. Teaching methods

The theoretical part of the training is conducted with the use of films and presentations that have been prepared so that students have a visual representation of lessons. Practical classes are conducted in the laboratory of Molecular Genetics and with the use of computers and software in the field of genetics and biotechnology in animal husbandry. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Lecture attendance | Yes | 10 | *Written part of the exam-tasks and theory* | Yes | 20 |
| Test | Yes | 30 | *Oral part of the exam* | Yes | 30 |
| Exercise attendance | Yes | 20 |  |
| Term paper | Yes | 10 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Vidović V., Stupar M. | Genetika životinja | Poljoprivredni fakultet, Novi Sad. | 2010 |
|  | Vidović V. | Molekulska genetika | Poljoprivredni fakultet, Novi Sad. | 2009 |
|  | Renaville R., Burny A. | Biotehnology in Animal Husbandry | Kluwer Academic, Netherlands | 2001 |
|  | Griffiths A.J.F. | Modern Genetics Analysis | W.H. Freeman & Co (Sd); Bk&CD-Rom edition. | 1998 |
|  | Tamarin R.H. | Principles of Genetics | WBC McGRAW-Hill | 1999 |

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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 Production* |
| Table 5.2 Course specification |