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| Course: | *Contemporary Technologies in Reproduction of Domestic Mammals* |
| Course id: 3МСТ1И01 |
| Number of ECTS: 6 |
| Teacher: | Saša B. Dragin, PhD, Associated Professor and Blagoje L. Stančić, PhD, Full Professor.  |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 30 | Practical classes: 30 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | Not. |
| 1. Educational goal

 Theoretical and practical knowledge and skills in the field of modern biotechnological methods, which are used to control and stimulation of the male and female animals reproductive function in domestic mammals species. Theoretical and practical knowledge in the field of *in vitro* manipulation of gametes and embryos (conservation, *in vitro* maturation and fertilization, reproductive cloning of early embryos, embryo transplants, sex determination, genetic engineering). |
| 1. Educational outcomes

 Qualifications of students to independently apply modern biotechnology methods to managing reproductive functions of domestic mammals species and, thus, increase their reproductive efficiency. To conduct independent analysis of the achieved results and is adopted by an independent performance assessment of production and to independently solve problems of reproduction in domestic animals. Student is qualified for independent analysis of scientific literature, to conduct independent scientific research and brings logical and reasonable conclusions based on the research results. After completion of the study, acquired knowledge, student can successfully transferred to other persons. Student is qualified for further studies at higher levels of education in the field of biotechnology.  |
| 1. Course content

*Theoretical lessons:* Endocrinology and physiology of male and female reproductive functions of domestic species of mammals; Biotechnology of reproduction (artificial insemination of cattle, pigs, sheep, goats and horses; embryo transplantation; manipulation of gametes and early embryos *in vitro*; induction of estrus; induction of superovulation; Induction and synchronization of oestrus outside the breeding season of sheep, goats and mares; synchronous induction of parturition; Methods of pregnancy diagnosis; Sex determination of gametes and embryos; Conservation of gametes and embryos - formation of gene banks); Specific methods of controlled reproduction of pigs, ruminants and horses.*Practical lessons:* Anatomy and histology of male and female sexual organs of domestic mammals; The morphology and physiology of oocytes and sperm; Features semen of domestic species of mammals; Control the quality of sperm; Technologies konzrevacije gametes and early embryos; Modern technologies of artificial insemination; Methods transplant embryos; Methods for detection of estrus; Methods of diagnosis of pregnancy. |
| 1. Teaching methods

 Lectures, Practical classes (laboratory and farms); Consultation,  |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points (50) | Final exam  | Mandatory | Points (50) |
| Lecture attendance | Yes | 5 | *Writing exam* | Yes | 20 |
| Exercise attendance | Yes | 5 | *Oral part of the exam (practical and theoretical)* | Yes | 30 |
| Test | Yes | 20 |  |
| Seminar work | Yes | 20 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Станчић Б. | Репродукција домаћих животиња (уџбеник).  | Пољопривредни факултет, Нови Сад.  | 2008. |
|  | Драгин С., Станчић И., Ердељан М. | Репродукција домаћих животиња (практикум).  | Пољопривредни факултет, Нови Сад. | 2011. |
|  | Станчић Б., Веселиновић С. | Биотехнологија у репродукцији домаћих животиња (уџбеник)*.* | Пољопривредни факултет, Нови Сад. | 2002. |
|  | Gordon, I. | Reproductive Technologies in Farm Animals.  | CAB Int. Publ., Wallingford, UK. | 2005. |

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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 |