Course Unit Descriptor

Study Programme: Veterinary Medicine
Course Unit Title: Biotechnological methods in domestic animal reproduction
Course Unit Code:3ДВМ4И63
Name of Lecturer(s): Dr Ivan B. Stančić, associate professor
Type and Level of Studies:DAS Veterinary Medicine
Course Status (compulsory/elective): Elective
Semester (winter/summer): Summer
Language of instruction: Serbian
Mode of course unit delivery (face-to-face/distance learning): Face to face
Number of ECTS Allocated:6
Prerequisites: No
Course Aims: Advancedintroducing of studentsto modern biotechnological methods for controlled (assisted) reproduction of domestic animalsunder industrial conditions. The goalis to obtain the experts capable forscientific researchandthe application of scientificadvancesandnew technologiesin the productionof meat, milk, wool, eggs and otheranimal products.
Learning Outcomes: Creating thehighly specializedscientistswith academiceducation, with the widerand deeperknowledgein the field of animal biotechnology. Qualified for independentscientific researchin thefield of modernlivestock production. Candidate's abilityto improvelivestock production, using modernscientific achievementsin the field ofanimalbiotechnology.
Syllabus: *Theory*A. Definition of controlled (assisted) reproduction of domestic animals; Induction and synchronization of sexual maturation; Synchronization of estrus and ovulation in sexually mature animals; Superovulation induction; Methods pregnancy diagnosis; Induction of parturition; Control post partum estrous cycle establishment; Artificial insemination; Embryo transplantation; Manipulation with gametes and embryos (gametes obtaining, *in vitro* fertilization, embryo cloning, sex determination of gametes and embryos, production of chimeras, transgenic animal production, storage of gametes and embryos *in vitro*); Control of cattle, sheep and goats, pigs, horses and poultry reproduction. *Practice* Anatomy and histology of the male and female reproductive systems of domestic mammals and birds, classical and new technology in domestic animals, methods of obtaining gametes, methods of synchronizing estrus; surgical and non-surgical methods of embryo transplantation; Modern methods for evaluating the reproductive efficiency of the herd in intensive production.
Required Reading: 1. Stančić, B.: Reprodukcijadomaćih životinja. UniverzitetunovomSadu, Poljoprivrednifakultet, 2008. 2. Feldman, E., Nelson, R.: Canine and Feline Endocrinology and Reproduction. Saunders, Elsevier, 2003. 3. Gordon, I.: Reproductive Technologies in Farm Animals. CAB Int. Publ., Wallingford, UK, 2005. 4. Stančić B., Veselinović, S.: Biotehnologijaureprodukcijidomaćih životinja (udžbenik).

UniverzitetuNovomSadu, Poljoprivrednifakultet, 2002.
5. Stančić, B.: Reprodukcija svinja (monografija). Univrezitet u Novom Sadu, Poljoprivredni fakultet, 2005.
6. Stančić, B.: Tehnologijaveštačkogosemenjavanjasvinja (priručnik). Poljoprivrednifakultet, 2006.
7. Stančić, I.: Reprodukcija domaćih životinja- IV deo: Reprodukcija pasa i mačaka (udžbenik). UniverzitetuNovomSadu, Poljoprivrednifakultet, 2012.

WeeklyContact Hours:4+4 (120)	**Lectures:**60	**Practical work:**60

Teaching Methods:

Theoretical lessons, Practical exercises, Consultations, Seminars, Laboratory work.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points 50	**Final exam**	Points 50
Active class participation	5	written exam	30
Practical work	5	oral exam	25
Preliminary exam(s)	20	…….	
Seminar(s)	15		

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