

<b>Study Programme:</b> Veterinary Medicine
<b>Course Unit Title:</b> Reproduction in domestic animals
<b>Course Unit Code:</b> 3HBM7O35
<b>Name of Lecturer(s):</b> Dr Ivan B. Stančić, associate professor; DVM Ivan M. Galić, assistant
<b>Type and Level of Studies:</b> IAS Veterinary Medicine
<b>Course Status (compulsory/elective):</b> Compulsory
<b>Semester (winter/summer):</b> Winter
<b>Language of instruction:</b> Serbian
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face to face
<b>Number of ECTS Allocated:</b> 5
<b>Prerequisites:</b> Histology and embryology I and 2; Veterinary physiology 1 and 2
<b>Course Aims:</b> Detailed introduction to contemporary theoretical and practical knowledge in the field of reproductive physiology, biotechnological methods of reproductive processes control, as well to technologies of breeding animals reproductive exploitation in certain mammal species (horses, cattle, sheep, goats and pigs), as well as the basic types of domestic poultry (chickens, geese, ducks and turkeys). The application of these findings for understanding and practical problem solving from other related disciplines of animal science and practice.
<b>Learning Outcomes:</b> Qualifications of students to independently apply modern biotechnology methods to managing reproductive functions of domestic mammals and birds. To apply optimal reproductive technology exploitation of domestic animals, in certain conditions, and technological systems of livestock production. That is adopted by an independent performance assessment of production and to independently solve problems of reproduction in domestic animals. After completion of the study, acquired knowledge can be successfully transferred to other persons. Student is qualified for further studies at higher levels of education in the field of biotechnological sciences.
<b>Syllabus:</b> <i>Theory</i> A. General physiology of reproduction in domestic mammals: Endocrine regulation of reproductive function; Functional morphology and histology of male and female sexual organs; Physiology of female sexual function; Physiology of male sexual function. B. Special physiology of reproduction of some mammals and birds species: cattle reproduction; sheep and goats reproduction; pig reproduction; horse reproduction; reproduction of domestic birds (chickens, geese, ducks and turkeys); dogs reproduction, cats reproduction. C. Biotechnology of reproduction: artificial insemination of cattle, pigs, sheep, goats, horses, dogs and cats; embryo transplantation; manipulation of gametes and early embryos in vitro; induction and synchronization of estrus; induction of superovulation; induction and synchronization of estrus outside the breeding season in sheeps, goats and mares; induction and synchronization of parturition; Methods of pregnancy diagnosis; Sex determination of gametes and embryos.

*Practice*

a) Laboratory exercises: Anatomy and histology of male and female sexual organs; Reproductive Endocrinology; Semen quality control; Dilution of sperm and insemination doses formation; Methods for estrus detection; The development of the fetus and fetal membranes; Methods of pregnancy diagnosis; Normal parturition; Analysis and evaluation of reproductive efficiency of the herd.

b) Field exercises: Perform on livestock farms and the experimental farm of the Department of Animal Husbandry, and include accommodation and food systems of certain categories of domestic animals; Artificial insemination of certain species of domestic animals; Hygiene and health care for certain categories of breeding animals.

**Required Reading:**

1. Станчић, Б. И.: Репродукција домаћих животиња (уџбеник), Универзитет у Новом Саду, 2014.
2. Драгин, С., Станчић, И., Ердељан, М.: Репродукција животиња (практикум), Универзитет у Новом Саду, 2011.
3. Станчић, Б. И. : Репродукција паса и мачака, Универзитет у Новом Саду, 2012.
4. Cupps, P.T.: Reproduction in Domestic Animals ( forth edition ). Academic Press, INC., San Diego, New York, Boston, Toronto, London, Sydney, Tokyo, 1991.
5. Станчић, Б., Кошарчић, Д.: Репродукција говеда (уџбеник), Универзитет у Новом Саду, 2007.

**Weekly Contact Hours:**

**Lectures: 3**

**Practical work: 2**

**Teaching Methods:**

Lectures, Practical classes (laboratory and farms); Consultation

**Knowledge Assessment (maximum of 100 points):**

<b>Pre-exam obligations</b>	Points 50	<b>Final exam</b>	Points 50
Active class participation	0-5	written exam	20
Practical work	0-5	oral exam	30
Preliminary exam(s)	0-30	.....	
Seminar(s)	0-10		

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