Reproduction & Biotechnology 1. – 2020 Fall Program of Lectures for the English Course 7th Semester: **TUESDAYS** in the **HETZEL HENRIK** lecture-hall(2x45') **Gr. 1-6.: from 08:15** **Gr. 7-12.: from 10:15**		
1.	**14 Sept.**	Porcine reproduction I. Physiology of the oestrus cycle, puberty, onset of cyclic ovarian activity after weaning. The remnants of seasonality and its practical aspects. *(J. Rátky)*
2.	**24 Sept.**	Porcine reproduction II. Fertilization. Early embryonic development. *(J. Rátky)*
3.	**28 Sept.**	Porcine reproduction III. Physiology and hormonal background of porcine pregnancy and parturition. *(J. Rátky)*
4.	**5 Oct.**	Physiology of reproduction in female animals IV. Development and maturation of the oocyte. Fertilization. Early embryonic development. The concept and species-based characteristics of maternal recognition of pregnancy. *(S. Cseh)*
5.	**12 Oct.**	Reproduction of small ruminants: Physiology of the oestrus cycle. Seasonality of reproduction. Induction and synchronization of the oestrus cycle. Methods for improving the ovulation rates. Pregnancy. *(S. Cseh)*
6.	**19 Oct.**	Reproduction of cattle I. Puberty. The cyclic ovarian function of the cow. Estrus. Estrus detection. Physiology and pathology of pregnancy (embryonic and fetal development, development of fetal membranes, implantation, endocrinology of pregnancy). *(B. Vincze)*
7.	**26 Oct.**	Reproduction of cattle II. Hormonal background of calving. Phases of calvingThe process of calving *(B. Vincze)*
8.	**2 Nov.**	Reproduction of cattle III The ovarian function in postpartum dairy and beef cows (first ovulation / onset of cyclicity; first estrus; re-conception). Energy imbalance, and protein overfeeding, trace elements and other factors influencing the postpartum reproduction. *(B. Vincze)*
9.	**9 Nov.**	Reproduction of cattle IV Characteristics of involution. Peri/postpartum metabolic disorders: milk fever, ketosis, and fatty liver disease *(B. Vincze)*
10.	**16 Nov.**	Physiology of reproduction in female animals I. Hypothalamus. Corpus pineale. Hypophysis. Ovarian structures (follicular development, ovulation, formation of corpus luteum) *(L. Solti)*
11.	**23 Nov.**	Physiology of reproduction in female animals II. Neurotransmitters, hormones, growth factors in animal reproduction. Concept and comparative aspects of cyclic ovarian function in domestic mammals. *(L. Solti)*
12.	**30 Nov.**	Physiology of reproduction in female animals III. Spontaneous and induced forms of ovulation. Seasonality of reproduction *(L. Solti)*
13.	**7 Dec.**	Reproduction of cattle V. Endocrine treatment procedures, estrus synchronization (gestagens, PGF2); induction of ovarian cyclicity (gestagen+eCG, GnRH). *(B. Vincze)*
14.	**14 Dec.**	Reproduction in cattle VI. Induction of ovulation (GnRH); induction and synchronization of cyclicity / ovulation (Ov-synch=GPG) in dairy and beef cattle *(B. Vincze)*