

## **DEPARTMENT AND CLINIC OF OBSTETRICS AND REPRODUCTION**

**Dear Students,**

The compilation of the brochure that you hold in your hand was originally “thought up” and recommended by the students of the English class in 2011. Of course now you have the updated version of the brochure. Without their recommendation and ideas this little information brochure would not have been born. After collecting the comments and suggestions and evaluating them, a very detailed summary was put together indicating the main points.

This brochure contains information connected with the subject of obstetrics, the history and staff of the Department, a timetable is included, topics of the lectures and practicals, and recommended reading are given, topics and dates of written tests and exams are also given, department services are summarized, information is provided connected with the preparation of diploma thesis also can be found in this brochure and so on.

Therefore, I ask your further help and encourage you to share your opinions about this brochure; how and where we should improve its quality, what information still we should include into it in order to help you through your study of obstetrics.

Budapest, 2nd February 2019

Prof. Dr. Sándor Cseh  
Head of the Department

## DEPARTMENT AND CLINIC OF OBSTETRICS AND REPRODUCTION

Address: 1078 Budapest, István u. 2.

Mailing address: H-1400 Budapest, P.O. Box 2.

Phone: (+36 1) 478 4206, (+36 1) 478 4200

Fax: (+36 1) 478 4207, (+36 1) 478 4101

Budapest campus, secretary's office: Building L, 1<sup>st</sup> floor, Room: 104

Webpage: <https://univet.hu/en/about/units/department-and-clinic-of-reproduction/>

E-mail addresses:

- [cseh.sandor@univet.hu](mailto:cseh.sandor@univet.hu) (Head of Department)
- [tookos.emese@univet.hu](mailto:tookos.emese@univet.hu) (Secretary of Department)
- [csepreghy.anna@univet.hu](mailto:csepreghy.anna@univet.hu) (Responsible for educational matter at the Dept.)

### **Veterinary reproduction and obstetrics**

The subject deals with the physiology and pathology of reproduction (reproductive physiology and pathology). The subject is of enormous importance, since without reproduction there is no production and without these two there is no useful, long life-span, upon which depends the economy of animal husbandry. Nowadays the economy is of great significance and is considered a decisive factor, and in respect to the world there is an ongoing harsh struggle. In companion animals the goal of veterinary intervention is sometimes the maintenance of pregnancy, or the achievement of optimal fertility and maximum number of offspring, but in other cases our aim is totally the opposite: to attain reversible or irreversible infertility (contraception).

For the reproduction of mammals two partners are necessary; female and male animals. Therefore obstetrics and reproductive biology deals with both the female and the male genital/sexual processes.

Reproduction is a cycle, and within this we can mention the small and large cycles. The small cycle includes the actual sexual cycle, *cyclus s. periodus sexualis*, while the large cycle includes the period which elapses between the two calving, and this is called inter calving period. The *service period* belongs to the large cycle, that is, the period that passes between the calving and the re-conception. Within the reproductive cycle the period of pregnancy,

*graviditas*, and later birth, *partus*, are essential. The course of the *puerperium*, the post-birth condition, plays a crucial role in postpartum fertility preservation.

Animals that possess reproductive abilities are designated as fertile. After the sexual intercourse (mating, copulation) of fertile animals the fertilization of the oocyte (egg) occurs and after that cell division starts and as a result of this first the embryo, then the fetus develops. The science dealing with the reproduction of female animals is one of the branches of science that discuss the large cycle. This discipline is known as **obstetrics**.

**Reproductive biology** deals with the reproductive capability of both males and females. Within this, **gynecology** deals with the pathophysiology (pathophysiologia) of the sexual/genital function of females, while **andrology** discusses the pathophysiology of the genital organs of males.

Within the subject we deal with those **techniques of assisted reproduction**, that are meant to increase the reproductive and productive capabilities of domestic animals. The first assisted reproductive technology, which was introduced in practice was artificial insemination, that was followed by embryo transfer. Presentation of fresh knowledge about the latest biotechnological interventions (ex. cloning or research on stem cells) are also part of the subject. Possibilities of application of these latest techniques and also current limitations of their use are discussed.

There can be a number of reasons for the decrease in reproductive capacity: 1. infectious and 2. non-infectious. In the latter group the ecological conditions play a vital role, including conditions of keeping, housing, nursing, handling, feeding, which are managed by the farmers. If the animals are not fed according to their reproductive / fertility needs the females can become infertile, the males can lose their sexual potency (libido) and become impotent. As a result of the inadequate conditions of animal keeping, nursing, housing, feeding, and breeding conditions the absorption of embryos can occur at a greater percentage (20-30%).

The full potential of the domestic animals' reproductive capability can only be achieved, if the females can rear their offspring. The most important condition of this is that the mothers can feed their newborns. For this reason, the **physiological functions and disorders of the udder** will be discussed within the frameworks of this subject. In addition to this the development and functioning of the udder is in close relation to the development and functioning of the genitals, pregnancy, delivery forecast, etc.. In addition to reproduction, an indispensable part of the economics of breeding is that the newborn animals, in as large percentage as possible, have to be able to survive and stay alive. Therefore, within the frameworks of this subject, we deal with the deficiencies of **obstetric hygiene**, problems resulting from **unprofessional delivery assistance**, and **attending to newborns and their diseases** as well (dealing with birth-related diseases).

## Short introduction of the department's history

<https://univet.hu/en/about/units/department-and-clinic-of-reproduction/>

Recognizing the practical importance of obstetrics, Béla Plósz have started teaching veterinary obstetrics as an independent subject in 1899. He used phantoms to demonstrate obstetrical aid and slaughterhouse calves for fetotomy. From this time on, castration and ovariectomy became a significant part of the veterinarian's activities. One of his most famous students and successors was Henrik Hetzel who introduced several new aspects such as prevention of infertility, physiology and pathology of embryo development, pregnancy and parturition. Infectious diseases of the reproductive organs, reproductive disorders caused by improper feeding and housing systems and metabolic diseases were also discussed. Hetzel initiated to establish a new clinic for obstetrics which was opened in 1930. His successor, Kálmán Bölcs házy introduced several hormonological methods, invented many obstetrical instruments and dealt with reproductive problems of the concentrated, intensive farming systems. Both Hetzel and Bölcs házy compiled several study books about animal reproduction and veterinary obstetrics. In collaboration with István Mészáros, the next head of the department Sándor Cseh has been working in organization of the national artificial insemination network. He introduced the training of artificial insemination for veterinary students and wrote books about obstetrical surgery and veterinary obstetrics. After his early death György Horváth became the leader of the department. His research activity focused on the field of mastitis and udder health. In 1973 the department moved to its present location into the new buildings and János Haraszti was nominated as chair of the department. Under his leadership there was a significant development in clinico-chemical and endocrinological methods and in the biotechnological research including the embryo transfer. After him László Zöldág became the chair with special interest in small animal reproduction and andrology. Since 1994 László Solti has been appointed to the head of the department. His research interest focused on the field of development and introduction into the practice of new immune-analytical procedures (CPBA, RIA and ELISA). His other research field was the animal biotechnology. He took part in the introduction of the embryo transfer procedure in Hungary. After 17 years of leadership, in 2011 the head of department position was taken over from László Solti by Sándor Cseh.

## **Tasks of the department:**

1. Theoretical and practical education of the students
2. Basic and applied research connected with reproduction
3. Clinical and laboratory service connected with female and male reproduction

## **I. EDUCATION (THEORETICAL AND PRACTICAL EDUCATION)**

<https://univet.hu/en/about/units/department-and-clinic-of-reproduction/education/>

### ***1. Veterinary obstetrics and reproduction (Mandatory course)***

The discipline is divided into the following main subjects: obstetrical aid and udder health (7th semester; Obstetric 1.), gynecology and reproductive care of different animal species (8th semester; Obstetrics 2.); andrology, assisted reproduction and biotechnology (9th semester, Obstetric 3). These subjects are covering the entire oestrous cycle, fertilization and pregnancy, parturition, puerperium and resumption of postpartal ovarian activity as well as reproductive management. Students can learn not only the theoretical aspects of neuroendocrine regulation of reproductive processes but also the most frequently used operative techniques like Caesarean section, ovariohysterectomy, teat operation or vaginal prolapse. In addition to these traditional topics, assisted reproduction such as collection and cryopreservation of semen or embryos, artificial insemination and embryo transfer, in vitro fertilization, cloning and transgenic animals are also taught.

Year: 4<sup>th</sup>, 5<sup>th</sup>

Term (semester): 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>

Lectures: 45h/semester (7<sup>th</sup>, 8<sup>th</sup> semester), 30h/semester (9<sup>th</sup> semester)

Practicals: 45h/semester (7<sup>th</sup>, 8<sup>th</sup> semester), 30h/semester (9<sup>th</sup> semester)

ECTS Credits: 4 (7<sup>th</sup> semester), 3 (8<sup>th</sup> semester), 7 (9<sup>th</sup> semester)

Examination: 7<sup>th</sup> semester: colloquium (written examination), 9<sup>th</sup> semester: final examination

### **Thematics:**

7<sup>th</sup> semester: Reproductive physiology. Obstetrical aid. Ruminant reproduction. Udder health.

8<sup>th</sup> semester: Reproduction of various species: horse, swine, dog, cat.

9<sup>th</sup> semester: Andrology. Assisted reproduction. Biotechnology.

## **Requirements:**

<https://univet.hu/en/about/units/department-and-clinic-of-reproduction/education/teaching-guides/>

Detailed description of the requirements to fulfill the subject and acceptance of semesters can be found and downloaded from the self-developed website of the Department (see: Education and monitoring of the acquired knowledge in „Obstetrics, reproduction and udder health care”) Shortly the main points of the monitoring and evaluation system are the followings:

7<sup>th</sup> semester: semester-ending exam (mark offered based upon the result of the midterm tests or written exam)

8<sup>th</sup> semester: practical grade (mark offered based upon the result of the midterm tests or written exam)

9<sup>th</sup> semester: final exam (preconditions to take the exam: valid, accepted three semesters, completed obligatory participation in specified diagnostic and therapeutic activities with written documentation (“Clinical card”).

## **Recommended readings**

- D.E. Noakes, Timothy J. Parkinson and Gary C.W. England (eds): Veterinary Reproduction and Obstetrics. 9th edition, Saunders Elsevier, London, 2009.
- M.H. Pineda and Michael P. Dooly (eds): McDonald’s Veterinary Endocrinology and Reproduction. 5th edition, Iowa State Press A Blackwell Publishing Company, 2003.
- R.S. Youngquist and Walter R. Threlfall (eds): Current Therapy in Large Animal Theriogenology. 2nd edition, Saunders Elsevier, St. Louis, Missouri, 2007.
- E.C. Feldman, R.W. Nelson: Canine and feline Endocrinology and reproduction. 3rd edition, Saunders 2004.
- P.L. Senger: Pathways to pregnancy and parturition 2nd edition, Pullman: Current Conceptions Inc. 2003. (3<sup>rd</sup> edition, 2011.)
- M. Sandholm, T. Honkanen-Buzalski, L. Kaartinen, S. Pyörala: The bovine udder and mastitis. 1st edition, University of Helsinki, faculty of Veterinary Medicine, Helsinki, 1995. Gary England, Angelika von Heimendahl: BSAVA Manual of Canine and Feline Reproduction and Neonatology. 2nd edition, British Small Animal Veterinary Association, Gloucester, 2010.

## ***2. Andrology and Assisted Reproduction (Elective subject)***

<https://univet.hu/en/education/courses/andrology-and-assisted-reproduction/>

The procedures included in the assisted reproduction techniques are used to aid the reproductive process of both humans and animals. The technical aspects of the assisted reproduction methods used in humans and animals (especially domestic animals and primates) are very similar, although of course there are substantial differences in the indication of assisted reproduction. The main object of the course is to familiarize the students with the advances made in the new areas of reproductive biology in the past quarter-century, since it has undergone intensive development, and with the new reproductive techniques (assisted reproduction techniques). The curriculum has been entirely processed in Power Point format. The files available, for each lecture, in the form of an outline contain all the essential information and elements of the curriculum. The material is updated every school year and, free of charge, it is made available to the students in its entirety on a CD in order to make the preparation for the exams easier.

Year: 5<sup>th</sup>

Term (semester): 10<sup>th</sup>

Lectures: 20 h

Practical: 10h

ECTS Credits: 6

Examination: colloquium; written exam (test)

Teaching staff: Sándor Cseh, László Solti and invited lecturers from abroad and Hungary

## **II. BASIC AND APPLIED RESEARCH CONNECTED WITH REPRODUCTION**

<https://univet.hu/en/about/units/department-and-clinic-of-reproduction/research/>

- Cryopreservation of gametes and embryos
- In vitro culture of embryos the effect of mycotoxins on in vitro development of embryos being early stages
- Study on the effect of long term melatonin treatment out of breeding season in Racka rams
- Effects of analgesics used for the castration of piglets on welfare and performance.
- The introduction of non invasive methods in measurement of mainly steroids hormones
- Retention, local tolerance and efficacy study for a progesterone containing vaginal device in cattle.
- Prenatal development of endocrine glands
- Developmental factors influencing individual variation in mammals.
- Progesterone contain of corpus luteum in bitch oestrous cycle
- Correlation of obesity and reproductive function in companion animals
- Effect of spaying on the metabolism of different organs

## **III. CLINICAL AND LABORATORY SERVICE CONNECTED WITH FEMALE AND MALE REPRODUCTION**

Check our website for further readings.

<https://univet.hu/en/about/units/department-and-clinic-of-reproduction/services/>

<p style="text-align: center;"><b>Obstetrics and Reproduction II. (8th semester)</b>  <b>PROGRAM OF LECTURES</b>  <b>2018/2019 – Spring</b>  (on MONDAYS from 8:15 AM to 11:00 AM; Hetzel Henrik Auditorium; 3 X 45 min)</p>		
1.	4 <sup>th</sup> Febr	Canine reproduction 1. Physiology of the oestrus cycle. Physiology and pathology of puberty. Estrus. Canine pregnancy and pseudopregnancy. ( <i>L. Müller</i> )
2.	11 <sup>th</sup> Febr	Canine reproduction 2. Parturition and involution. Cesarean section, clinical care of mother and neonatology in canine. Peripartal diseases. ( <i>L. Müller</i> )
3.	18 <sup>th</sup> Febr	Canine reproduction 3. Cystic endometrial hyperplasia (CEH/HGCE) – pyometra complex and its extragenital consequences. Symptoms and treatment. Feline reproduction. Physiology of the oestrus cycle. Estrus. Puberty. Pregnancy and pseudopregnancy. Parturition and involution. ( <i>L. Müller</i> )
4.	25 <sup>th</sup> Febr	Canine reproduction 4. Abnormalities of the oestrus cycle. Pharmacological treatments influencing the oestrus cycle. Diagnosis and treatment of mastitis, benign and malignant mammary diseases. ( <i>L. Müller</i> )
5.	4 <sup>th</sup> Mar	The effects, timing and technique of spaying/neutering small animals. ( <i>L. Müller</i> )
6.	11 <sup>th</sup> Mar	Equine reproduction 1. Physiology of the oestrus cycle. The heat. The seasonality of the oestrus cycle. Possibilities and limitations of inducing the first ovulation in the beginning of the breeding season. Oestrus synchronisation in the breeding season. ( <i>L. Solti</i> )
7.	18 <sup>th</sup> Mar	Equine reproduction 2. Genital disorders and infertility in horses: Ovarian disorders with changes in size (haematoma, abscess, and tumor). Ovarian disorders with no changes in size (shortening of the CL-phase, dioestral ovulation, corpus luteum persistency, and nymphomania). ( <i>L. Solti</i> )
8.	25 <sup>th</sup> Mar	Equine reproduction 3. Causes and differential diagnosis of anoestrus in the breeding season. Pathology, symptoms, diagnosis and treatment of endometritis and endometriosis. Fibrosis periglandularis. ( <i>L. Solti</i> )
9.	1 <sup>st</sup> Apr	Equine reproduction 4. Equine pregnancy: Characteristics of embryonic and foetal development. The endocrinology of the pregnancy. Diagnosis of the pregnancy. Embryonic mortality and abortion. Twin pregnancy and its management. Abortions of different causes. ( <i>A. Horváth</i> )
10.	8 <sup>th</sup> Apr	Equine reproduction 5. Equine obstetrics: Displacement of the pregnant uterus. Predicting the time of the parturition. The foaling and its supervision. Caring for the newborn foal. Placental retention. The equine puerperium. Injuries of the reproductive tract. Onset of cyclic ovarian function after foaling. The foal heat. ( <i>A. Horváth</i> )
		<b>15<sup>th</sup> Apr: Easter Holiday</b>
		<b>22<sup>th</sup> Apr: Easter Monday</b>
11.	27 <sup>th</sup> Apr, Saturday!	Porcine reproduction 1. Physiology of the oestrus cycle, puberty, onset of cyclic ovarian activity after weaning. The remnants of seasonality and its practical aspects. Oestrus and oestrus detection. Induction of oestrus. Possibilities and limitations of synchronization. ( <i>J. Rátky</i> )
12.	29 <sup>th</sup> Apr	Porcine reproduction 2. Fertilization. Early embryonic development. Endometritis after artificial insemination, as a main cause of infertility. Herd-level management of reproduction. ( <i>J. Rátky</i> )
13.	6 <sup>th</sup> May	Porcine reproduction 3. Porcine pregnancy and parturition: Physiology, pathology and diagnosis of pregnancy. Farrowing. The involution of the sow. Caring for the piglets and their main diseases. Nutritional and environmental factors influencing the reproduction. ( <i>J. Rátky</i> )
14.	13 <sup>th</sup> May	Guest lecturer ( <i>guided by S. Cseh</i> )

## **GUEST LECTURER:**

### **Bruce W. Christensen DVM**

Dr. Bruce William Christensen graduated in 2002 from the Faculty of Veterinary Science at Cornell University, USA.

He worked as a resident, then as a clinician at the University of Florida (2002-2007), then at different horse clinics in Australia and the Cayman Islands (2007-2008). He worked as visiting scientist at the Cayman Islands and in Hungary at the Szent István University Faculty of Veterinary Science (a guest lecturer every year at the university).

Currently he teaches at UC Davis School of Veterinary Medicine (clinical reproductive biology, theoretical lectures and practical training). He is a very active researcher in the field of reproductive biology (since 2008).

From 2006 he is a member of the American College of Theriogenology and in 2007 he obtained the MSc degree from the University of Florida.

He has extensive publications and he directed numerous research programs (research grants) in recent years. He is the co-author of several book chapters and a member of several scientific/clinical societies (Society for Theriogenology, American Association of Zoo Veterinarian, American Veterinary Medical Association, Society for Conservation Biology).

He is married and he is the father of a boy and a girl.

## Training Program of PLENARY Demonstrations for the 8<sup>th</sup> Semester

MONDAYS		Budapest – Hetzel Henrik lecture-hall from 16:15 – 3x45'
1.	4 <sup>th</sup> Febr	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The caesarean section (Indications for the surgery, preparation and the technique of the surgery in ruminants, pigs and horses; <i>video and slide demonstration</i> ) ( <i>Prof. O. Szenci</i> )
	11 <sup>th</sup> Febr	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Szenci and his team</i> )
2.	18 <sup>th</sup> Febr	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Examination of dam and foetus, supervision and the main disorders of parturition in small ruminants. Flock / herd reproduction management ( <i>Prof. O. Szenci</i> )
	25 <sup>th</sup> Febr	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci</i> )
3.	4 <sup>th</sup> Mar	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Examination of the patient, supervision of the parturition and the main disorders at parturition in pig. Ways to control the parturition. Genital organs of the gilt and sow (demonstration on slaughter house material). Medicines used at the reproductive management in pig ( <i>Prof. O. Szenci</i> )
	11 <sup>th</sup> Mar	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci</i> )
4.	18 <sup>th</sup> Mar	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Medical attendance of the dam after parturition (diagnosis and treatment of injuries of the birth canal, ways to facilitate the expelling of the placenta, uterine lavage at various animals). Caring for the newborn (facilitating the respiration, treatment of the asphyxiated newborn, umbilical care) ( <i>Prof. O. Szenci</i> )
	25 <sup>th</sup> Mar	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci</i> )
5.	1 <sup>st</sup> Apr	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Introduction of the diagnostic methods and treatments in management of equine reproduction (rectal and ultrasound examination of the ovaries and the uterus, lavage of the uterus, collection of samples for bacteriological, cytological and histological examinations, examination of the cervical smear and the histology of biopsy samples from the endometrium) ( <i>Prof. O. Szenci</i> )
	8 <sup>th</sup> Apr	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci and his team</i> )
<i>15<sup>th</sup> April - Easter Holiday</i>		
<i>22<sup>nd</sup> April - Easter Monday</i>		
6.	<b>27<sup>th</sup> Apr, Saturday!</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Differential diagnostic procedures in recumbent peri-parturient cows. Diagnostic value of ketonuria ( <i>Prof. O. Szenci</i> )
	29 <sup>th</sup> Apr	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci</i> )
7.	6 <sup>th</sup> May	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> Herd-level management of mastitis caused by (1) contagious pathogens and (2) environmental pathogens ( <i>Prof. O. Szenci</i> )
	13 <sup>th</sup> May	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Prof. O. Szenci and his team</i> )
<b>Practical retake on Üllő: at the date of the last small group practice</b>		

### Practical Training Program for the 8th Semester

WEDNESDAYS		Üllő: 3x45 min. – from 8:15 by special shedule
<b>1.</b>	<b>6<sup>th</sup> Febr</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Vasectomy and penis-translocation of the teasing ram ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>13<sup>th</sup> Febr</b>	<u>Participants:</u> Group. 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
<b>2.</b>	<b>20<sup>th</sup> Febr</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Caesarean section in cow (practice of the surgery on animals bought for this purpose) ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>27<sup>th</sup> Febr</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Szenci and his team</i> )
<b>3.</b>	<b>6<sup>th</sup> Mar</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Diagnostic methods and treatment procedures during the uterine involution in cattle (demonstration and practice in cows C-sectioned one and two weeks earlier). Preparations widely used for treatment of bacterial complications in uterine involution ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>13<sup>th</sup> Mar</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
<b>4.</b>	<b>20<sup>th</sup> Mar</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Caesarean section in sows (practice of the surgery on animals bought for this purpose) ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>27<sup>th</sup> Mar</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>Szenci and his team</i> )
<b>5.</b>	<b>3<sup>rd</sup> Apr</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Diagnostic methods and treatments in management of equine reproduction (rectal and ultrasound examination of the ovaries and the uterus, lavage of the uterus, collection of samples for bacteriology, cytology and histology, examination of the cervical smear and the histology of bioptic samples from the endometrium) ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>10<sup>th</sup> Apr</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
<b>17<sup>th</sup> April - Easter Holiday</b>		
<b>24<sup>th</sup> April - International Day</b>		
<b>1<sup>st</sup> May - International Holiday</b>		
<b>6.</b>	<b>8<sup>th</sup> May</b>	<u>Participants:</u> Group 1, 2, 3, 4. <u>Subject:</u> Operative interventions on the bovine udder (injuries and fistulas of the teat and the glandular part of the udder) ( <i>practice</i> ). Artificial drying-off. Aseptic technique of taking milk samples for bacteriology. Rapid cow side tests used for detection of subclinical mastitis. The most important preparations used in management of mastitis ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
	<b>15<sup>th</sup> May</b>	<u>Participants:</u> Group 5, 6, 7, 8. <u>Subject:</u> The same, as for the other half of the class one week earlier ( <i>A.Horváth, L.Lénárt, Z.Szelényi</i> )
<b>Practical retake on Üllő: at the date of the last small group practice</b>		

Students are requested to be present wearing white coat and rubber boots. Trainers/clinicians of the farm animal clinic Üllő ask you to bring forceps, needle-holder, scalpel and scissors with yourself.

**Mid-term examinations** (written, multi-choice test):

**There are 2 mid-term tests in this semester**

1. 12th March (Tuesday) 7:30- canine and feline reproduction lectures  
1-2-3-4 gr.: HETZEL; 5-6-7-8 gr.: TORMAY
2. 2nd May (Thursday) 7:30- equine reproduction lectures  
1-2-3-4 gr.: HETZEL; 5-6-7-8 gr.: TORMAY

**Retake for both tests:** 9th May, Thursday (appointment and room – later)

(Retake is for those students who did not write the test, or who failed it)

### **Preparation of the Diploma thesis**

For those students who prepare their diploma thesis at the Department of Obstetrics and Reproduction we warmly recommend to read carefully the information material provided by the Central Library of the Faculty

### **The order of duty at Small Animal Reproduction Clinic:**

1. No more than five students have a permission to participate in clinical work in examination room and/or operation room of reproduction clinic simultaneously. The order is first one first serve except the students in obligatory duty. Students have to wear a clean white cloth or any type of surgeon's cloth which haven't been used at clinic of infective patients, and at the Department of Pathology.
2. In the operation room the use of operation cap, mask and plastic foot-muff (all arranged by the students oneself) is obligatory.
3. The touch, feed, drink and take for a walk of the hospitalised patients is forbidden except the agreement of the doctor of duty at the Reproduction Clinic.

## **Information on the neutering programme**

A Memorandum of Understanding was signed by the representatives of the University of Veterinary Science, the National Food Safety Office, and the Ministry of Rural Development in 2013. According to this agreement the clinical veterinarians of the Department and Clinic of Obstetrics and Reproduction have been neutering shelter dogs since the beginning of November 2013. The main goal of the program is to provide an opportunity for our students to improve their practical skills. Therefore students are encouraged to participate in the surgeries.

Operations are performed in the morning on each day from Monday to Thursday (2 operations per day), in order to raise the number of patients available for practical training. According to the Department's preliminary calculations it is predicted that our students will have the possibility to take part in at least three surgeries before finishing their study at the University.

We won't organize a schedule for visiting the surgeries, because the capacity of the operating theatre is limited, furthermore students from the 11<sup>th</sup> semester, Erasmus students, and those on shifts will have priorities over the volunteers for entering the room. Nevertheless, we hope that our students will seek the possibility to take part in the program and will participate in the surgeries voluntarily, if the operating theatre is not full.

## **Information on the obligatory summer practice**

We would like to inform you about the **obligatory summer practice** after the IV. year.

At the end of the fourth year, during the summer holiday every student must participate a **4 week- long practice between 2nd of July and the 9th of September in 2018**. Students should essentially spend their summer practice at a facility which provides professional health care for at least one of the main **domestic animal species** (horse, ruminants, swine, dog or cat). But you can spend 2 *weeks* from the 4 weeks period at such places what dealing with exotic animals, for example: at zoo.

Regarding to the limited resources of the University's clinical establishments, the Clinics of the University will receive preferentially the Hungarian students. Because of it, the University encourages the members of the international class to *spend their summer practice in their motherland*.

Nevertheless, it is still possible for some English-speaking students to join the clinical work in Hungary. You can spend the summer practice at the Horse Clinic at Üllő or at the Small Animal Clinic in Budapest, but only in case of *remaining free places* after the closure of the sign-up period organized for the Hungarian students.

This practically means, that only a few English-speaking students will get this opportunity, and the final decision can only be made by the heads of the establishments after the preparation of the Hungarian shift schedules in May/ June. Therefore it is advisory for you to **find a clinic/farm** in your country during the spring period and not to await the above mentioned decision which at the end might not be so beneficial for you as expected. We will send an e-mail to the class representative in April and ask her to collect the names of those who are still interested in participating the clinical work at one of the University's establishments.

For your extramural practice (out of the University) to be accepted, following the summer practice, **a certificate and evaluation form must be filled in by the supervisor** and this certificate must be bound in your **diary-like report** of the summer practice. The diary-like report will be evaluated by the Department of Internal Medicine and it is counted in the final exam, so it should be sent to them before a given deadline (the members of the Dep. of Int. Med. will give further information about it).

The above mentioned **certificate**, as well as the **requirements of the diary-like report** can be downloaded from the website of the Department of Internal Medicine (from the downloadable materials of the [Summer practice course](#), with the password: INTmed01).

If you have any further questions about the summer practice, please feel free to contact dr.Csepreghy Anna ([csepreghy.anna@univet.hu](mailto:csepreghy.anna@univet.hu)), who is responsible for the organisation from the Department and Clinic of Reproduction or dr. Szabó Korinna ([szabo.korinna@univet.hu](mailto:szabo.korinna@univet.hu)), who is the responsible teacher of the summer diary from the Department and Clinic of Internal Medicine.

Budapest, 2nd of February, 2019

Prof. Dr. Cseh Sándor  
The Head of the Department of Obstetrics  
and Food Animal Medicine Clinic