



Student handout 2006

**Department and Clinic of Surgery and
Ophthalmology
Faculty of Veterinary Science
Szent István University**

**Edited by T. NÉMETH, DVM, PhD
Associate Professor and Head of Surgery**

Department and Clinic of Surgery and Ophthalmology

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General information

Subjects being required to be fulfilled before taking Surgery and Ophthalmology: Anatomy, Pathophysiology, Internal Medicine Diagnostics, Pharmacology.

Short history of the department

Department of Veterinary Medicine was founded in 1786 as part of the University of Pest established by *King Josef II*, which institution already dealt actively with the education of surgery. Students for human medicine of the University compulsorily studied surgical aethiology and operative surgery accompanied by subject of veterinary medicine performed by *S. Tolnay* on the basis of surgical textbook edited by Prof. Wolstein from Vienna (1785). At that time veterinary surgery remained at „second level” behind the human medicine. Remarkable progress in the education of veterinary surgery was achieved under *V. Zlamal* (1803-1886) recognising the importance of surgery as an independent subject completing it with other related disciplines. The first teacher of surgery was *F. Varga*, a medical doctor, who was an assistant of Prof. Balassa, the founder of Hungarian operative surgery. In 1870 the „Special Surgical and Operative Department” was established and moved into present-day buildings in Rottenbiller street. *B. Plósz*, at the time of his heading, completely reconstructed and reorganised the department, introduced conditions of surgical asepsis and operative surgery. He was outstanding in orthopaedics and abdominal surgery of the horse. Following head of the department, *M. Berrár* (1884-1929) was an internationally accepted expert of veterinary surgery and ophthalmology. Radiological unit was established by *E.Gy. Guoth* after 1929. *Gy. Kómár*, then *A.B. Kovács* took part in the foundation of hoof and abdominal surgery of the horse and cattle. *L. Tamás* headed the department between 1981 and 1989 contributing to the progress of equine surgery followed by *J. Tóth*, the major renewer and reconstructor of the department developing the institution onto a reasonable European level both in large and small animal surgery with regard to both instrumentation and special work. After years under supervision by Prof. Tamás and Ferenc Felkai as curators, Tibor Németh became the Assoc. Professor and Head of Surgery by 2005.

Register of the academic staff

staff	DEGREE	ASSIGNMENT	SPECIALITY	E-MAIL
Tibor NÉMETH	DVM PhD CertSACS	Assoc. Professor Head of Department	Small animal soft tissue surgery	Nemeth.Tibor @ aotk.szie.hu
Gábor BODÓ	DVM PhD	Senior Lecturer Assist. Professor (adjunct)	Large animal surgery	Bodo.Gabor @ aotk.szie.hu
Zoltán DIÓSZEGI	DVM CertSACS	Senior Lecturer Assist. Professor (adjunct)	Small animal orthopaedics and neurology	Zdiosz @ yahoo. com
Zsolt KENDIK	DVM	Senior Lecturer Assist. Professor (adjunct)	Small animal orthopaedics	Zskendik @ yahoo.com
Attila ARANY TÓTH	DVM CertSACS	Assist.Professor	Radiology Cytology	Aaranytoth @ yahoo.com
Péter CSÉBI	DVM	Assist. Professor	Radiology Neurology	Pcsebi @ freemail.hu
Zita MAKRA	DVM	Assist. Professor	Ophthalmology	Makra.Zita @ aotk.szie.hu
Ferenc SZABÓ	DVM	Assist.Professor	Radiology	Szabo.Ferenc @ aotk.szie.hu
Zsolt SZENTGÁLI	DVM CertSACS	Chief clinician	Ophthalmology	Szentgal @ freemail.c3.hu
Miklós DUNAY	DVM CertSACS	Clinician	Anaesthology Dentistry Intensive care	DunayMiklosPal @ aotk.szie.hu
Viktória SÉRE	DVM	Clinician	Anaesthesiology Intensive care	Sviki @ yahoo.com

Credits of Surgery and Ophthalmology

Radiology – Anesthesiology – General Surgery:	7th semester	3 points
Detailed Surgery I.:	8th semester	2 points
Ophthalmology:	9th semester	6 points
Detailed Surgery II.:	10 th semester	2 points

Curriculum

7th semester:

- **Radiology** (Dr. Arany Tóth - Dr. Csébi – Dr. Bodó)
- **Anaesthesiology** (Dr. Dunay – Dr. Makra)

8th semester:

- **General Surgery, Surgical Diagnostics** (Dr. Németh – Dr. Szabó – Dr. Izing)
- **Detailed Soft Tissue Surgery I.** (Dr. Németh - Dr. Bodó)

9th semester:

- **Detailed Soft Tissue Surgery II.** (Dr. Németh - Dr. Bodó)
- **General and detailed orthopaedics** (Dr. Diószegi-Dr. Kendik-Dr. Bodó)
- **Neurosurgery** (Dr. Diószegi - Dr. Kendik)

10th semester:

- **Ophthalmology** (Dr. Szentgáli – Dr. Makra)

Short description of subjects

Radiology:

- principles of Radiology
- radiographic diagnostics of different regions – in large and small animals

Anesthesiology:

- principles of anesthesiology
- anesthesiology of premedication
- general anesthesiology
- local anesthesiology
- analgesia
- anesthesia of different species

General Surgery:

- animal handling
- surgical basic and supplementary diagnostics
- classification, forms and treatments of wounds
- shock
- antiinflammatory agents, antibiotics

Soft Tissue Surgery:

- general operative surgery
- surgery of the head and neck
- surgery of the upper airways and thorax
- surgery of hernias
- abdominal surgery

Orthopaedics and Neurology:

- surgical diseases of the bones and joints
- diseases of tendons, tendon sheaths and bursae
- lameness diagnostics in large and small animals
- limb diseases in the horse
- limb diseases of the cattle and sheep
- principles in bone and joint surgery
- principles of veterinary neurology (diseases of the spine, diagnostics, therapy)

Ophthalmology:

- ophthalmologic basic and supplementary examinations
- anatomy and physiology of the eye
- congenital and acquired ophthalmologic conditions in large and small animals

Educational and Examination Requirements

Although attendance the **lectures** is not compulsory, the examinations are based on the topics. The attendance each **practical** as well as maximum 2 unsuccessful written entrance tests per semester at large animal practicals are the conditions of obtaining the semester certification signature. White coat and stethoscope are necessary for practicals.

The 7th semester is followed by a **written Semi-final examination**, which covers radiology, and anesthesiology. The dates of the written examination are assigned according to the students' agreement. In case of failing, the written examination is to be repeated just in oral form!

The **Final examination of surgery** is being held at the end of the 9th semester. The examination consists of a theoretical (radiology, anesthesiology, surgical diagnostics, general and detailed surgery) and a practical (surgical and ophthalmologic diagnostics, operative surgery) part. The overall result is the summary of the two parts. The final examination is held either in the main campus or in Üllő Large Animal Hospital.

The **semi-final examination of ophthalmology** is at the end of the 10th semester

Any further detailed and actual information is found on the **department board** at the entrance of the Surgery Lecture Hall. The students are kindly asked to follow these information regularly. Making appointment at the surgery secretariat is possible on personal or objective purpose.

Elective courses managed by the department

- Diagnostic imaging in small animal practice
(lecturers: Dr. Manczur – Dr. Arany Tóth)
- Specific operative techniques in small animal soft tissue surgery
(lecturer: Dr. Németh)

- Operation techniques: hand-on practice on kadavers (soft tissue surgery)
(lecturers: Dr. Szalay – Dr. Németh)
- Operation techniques: hand-on practice on kadavers (orthopaedics)
(lecturers: Dr. Szalay – Dr. Diószegi)
- Diagnostic imaging in equine orthopaedics
(lecturer: Dr. Bodó)
- Equine colic
(Dr. Bodó)

Learning sources, suggested readings

The material of the examination is based on the topics of lectures and practicals! The handouts of lectures are provided and available for the students by lecturers. The suggested readings helping the preparation for examination are the followings:

Auer, J. A.: Equine surgery. Philadelphia, Saunders, 1992.

Barnett, K. C.: Colour atlas of veterinary ophthalmology. London, Wolfe Medical Publ., 1990.

Bedford, P.G.C. : Small Animal Anesthesia The Increased-Risk Patient. Bailliere Tindall, 1991.

Brinker, N. O. - Piermattei, D. L. - Flo, G. L.: Handbook of small animal orthopedics and fracture treatment. Philadelphia, Saunders, 1990.

Butler, J. A. (et. al.) : Clinical radiology of the horse. Oxford, Blackwell Science, 1993.

Donald, E. Thrall: Textbook of Veterinary Diagnostic Radiology. W.B. Saunders, 1994 (2nd ed.)

Gelatt, K. N.: Veterinary ophthalmology. Philadelphia, Lea & Febiger, 1981. 1992.

Hall, L.W. - Clarke, K. N.: Veterinary anaesthesiology. London, Bailliere Tindall, 1992.

Melwraith, C. W. - Turner, A. S.: Equine surgery advance techniques. Philadelphia, Lea & Febiger, 1987.

Muir W. W. Hubbel, J. A. E. : Handbook of Veterinary Anesthesia. Mosby, 1995

Piermattei, D. L.: An atlas of surgical approaches the bones and joints of the dog and cat. Philadelphia, Saunders, 1993.

Pfeiffer, R. L.: Small animal ophthalmology a problem oriented approach. Philadelphia: Saunders, 1989.

Robinson, N. E.: Current therapy in equine medicine 3. Philadelphia, Saunders 1992.

Slatter, D. H.: Textbook of small animal surgery. Philadelphia: Saunders, 1995.

Staller, Fundamentals of veterinary ophthalmology. Philadelphia, Saunders, 1990.

Stashak, T. S.: Adam's lameness in horses. Philadelphia, Lea & Febiger

Stashak, T. S.: Equine wound management. Philadelphia, Lea & Febiger, 1991.

Traub-Dargatz, J. L - Brown, C. M.: Equine endoscopy. St. Louis, Mosby, 1990.

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

LECTURE COURSE OF SURGERY

4th Year - 1st semester

2006/2007

(Tuesdays 13.15 – 15.00)

Sept 5	Principles of radiology	Dr. Arany-Tóth
Sept 12	Radiological examination of extremities in small animals Radiographic examination of the vertebral column and the head in small animals I.	Dr. Arany-Tóth
Sept 19	Radiographic examination of the vertebral column and the head in small animals II. Radiographic examination of the abdomen in small animals	Dr. Arany-Tóth
Sept 26	Radiography of the urinary system in small animals	Dr. Arany-Tóth
Oct 3	Radiographic examination of upperairways and the thorax in small animals (1 h) Radiographic examination of the horse I. (1 h)	Dr. Arany-Tóth Dr. Bodó
Oct 10	Radiographic examination of the horse II.	Dr. Bodó
Oct 17	Preanesthetic examination. Pharmacology of anesthetics	Dr. Dunay
Oct 24	Syringe pumps, anesthetic machines. Perioperative monitoring in small animals Perioperative analgesia in small animals	Dr. Dunay
Oct 31	Anesthesia protocols in small animals (dog, cat)	Dr. Dunay
Nov 7	Perioperative analgesia in large animals Local anesthesia. Perioperative monitoring in large animals	Dr. Makra
Nov 14	Anesthesia protocols in large animals (horse, cattle, swine)	Dr. Makra
Nov 21	Anesthesia of risk patients and emergency in large animals	Dr. Makra
Nov 28	Anesthesia of risk patients and emergency in small animals	Dr. Dunay
Dec 5	Principles of Surgical Diagnostics Procedures	Dr. Dunay
Dec 12	Specific methods of surgical diagnostics(UH, CT, Scintigraphy)	Dr. Szabó

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

LECTURE COURSE OF SURGERY

5th Year - 1st semester
2006/2007
(Thursdays 14.15 – 17.00)

Sept 7	Surgery of the liver, biliary system and the spleen	Dr. Németh	2 h
	Small animal urogenital surgery I.		
	Surgery of the kidney	Dr. Németh	1 h
Sept 14	Small animal urogenital surgery II.		
	Surgery of the ureter and the urinary bladder	Dr. Németh	2 h
	Surgery of the urethra	Dr. Németh	1 h
Sept 21	Small animal urogenital surgery IV.		
	Surgery of the prostate gland. Cryptorchidism. Castration	Dr. Németh	2 h
	Surgical aspects of the acute abdomen in small animals.	Dr. Németh	1 h
Sept 28	General orthopedics I.	Dr. Diószegi-Dr. Kendik	3 h
Oct 5	General orthopedics II.	Dr. Diószegi-Dr. Kendik	3 h
Oct 12	Lameness examination in small animals I. (diseases of the fore- and hindlimb)	Dr. Diószegi - Dr. Kendik	3 h
Oct 19	Lameness examination in small animals II. (diseases of the fore- and hindlimb)	Dr. Diószegi - Dr. Kendik	2 h
	Principles of bone and joint surgery I. (conservative treatment)	Dr. Diószegi - Dr. Kendik	1 h
Oct 26	Principles of bone and joint surgery II. (operative treatment)	Dr. Diószegi - Dr. Kendik	3 h
Nov 2	Small animal neurology	Dr. Diószegi - Dr. Kendik	2h
	Surgery of the urogenital system in large animals	Dr. Bodó	1 h
Nov 9	Castration of horses, cattle and pigs	Dr. Bodó	2 h
	Conformation evaluation, flexured deformities in horses	Dr. Bodó	1 h
Nov 16	Lameness examination in horses I-II.	Dr. Bodó	3 h
Nov 23	Diseases of the tendons, tendon sheaths and bursae	Dr. Bodó	2 h
	Examination of the hoof, injuries, diseases		

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

	(traumatic and punctured injuries, thrush, cancer)	Dr. Bodó	1 h
Nov 30	Inflammation in the hoof, navicular disease (bruising, hoof abscess, laminitis)	Dr. Bodó	2 h
	Examination of the front limb and neck, diseases	Dr. Bodó	1 h
Dec 7	Examination of the hindlimb and back, diseases (Podotrochlosis)	Dr. Bodó	2 h
	Diseases of the hoof in cattle, sheep and swine	Dr. Bodó	1 h
Dec 14	Fracture treatment in horses	Dr. Bodó	2 h
	Principles of equine joint surgery	Dr. Bodó	1 h

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

Practical Training Course of Surgery in the main campus "István street"

English Course, 4th year , 1st term
2006/2007
(on Mondays)*

Sept 4 Sept 11	Principles of radiological techniques	(Dr. Arany-Tóth)
Sept 18 Sept 25	Radiographic techniques and recumbency in Small Animals	(Dr. Csébi)
Oct 2 Oct 9	Radiographic contrast studies	(Dr. Arany-Tóth)
Oct 16 Oct 30	Evaluation of X-ray pictures	(Dr. Arany-Tóth)
Nov 6 Nov 13	Practical small animal anesthesiology I.	(Dr. Dunay – Dr. Sére)
Nov 20 Nov 27	Practical small animal anesthesiology II.	(Dr. Dunay – Dr. Sére)
Dec 4 Dec 11	General and detailed examination in Small Animals	(Dr. Sére)

Schedule:

(on Mondays):

* The first date means Group 1, 2 and 3, the second date means Group 4, 5 and 6 according to the following order:

8.15 – 10.00: Group 2 or 5

11.15 – 13.00: Group 1 or 4

13.15 - 15.00: Group 3 or 6

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

Practical Training Course of Surgery at the main campus "István street"

English Course, 5th year , 1st term
2006/2007
(on Tuesdays*)

Sept 5, 12	Surgery of the small intestine (enterotomy, intestinal resection and anastomosis)	(Dr. Németh)
Sept 19, 26	Splenectomy; lobectomy; nephrectomy	(Dr. Németh)
Oct 3, 10	Cystotomy. Radiological differential diagnostics of surgical abdominal cases	(Dr.Németh)
Oct 17, 24	Urethrostomy. Castration.	(Dr.Németh)
Oct 31 Nov 7	Lameness examination in small animals.	(Dr. Csébi-Dr.Sére)
Nov 14, 21	Approaches to the bones and joints in small animals.	(Dr.Kendik-Dr.Sére)
Nov 28 Dec 5	Neurological examination	(Dr.Diószegi-Dr.Csébi)

Schedule:

* The first date means Group 3 and 4, the second date means Group 1 and 2 according to the following order:

8.15 – 11.45 : Group 1 or 3

12.00 – 15.30 : Group 2 or 4

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

Practical Training Course of Surgery in "Üllő Large Animal Clinic"
English Course, 4th year , 1st term
2006/2007
(on Mondays)*

30. Oct. and 6. Nov.	How to handel large animals to prevent accidents Anaesthetic machines and breathing systems, local anaesthesia	Dr. Makra Zita Dr. Veres Kata
13. Nov. and 20. Nov.	Performing radiological examination on horses How to interpret X-rays of extremities	Dr. Bodó Gábor Dr. Szabó Ferenc
27. Nov. and 4. Dec.	Radiological examination II. General and detailed examination in large animals Wound management and bandaging	Dr. Szabó Ferenc Dr. Bodó Gábor Dr. Izing Simon Dr. Szabó Ferenc

Schedule:
(on Mondays):

* The first date means Group 1, 2 and 3, the second date means Group 4, 5 and 6 according to the following order:

8.15 – 12.30 group 1.,2 or. 4.,5

12.15 – 16.00 group 3. or 6.

Végleges tematika (végleges): Dr. Bodó-Dr. Németh, 2006.augusztus 29.

Practical Training Course of Surgery at "Üllő, Large Animal Clinic"
English Course, 5th year , 1st term
2006/2007
(on Tuesdays*)

Sept 5, 12	Castration of large animals	Izing – Veres Bodó - Langer
Sept 19, 26	Lameness diagnostics I. Conformational abnormalities, Palaptional findings	Szabó – Izing
Oct 3, 10	Lameness diagnostics II. Examination of the lame horse in motion, Practicing of provocation tests	Szabó - Izing
Oct 17, 24	Lameness diagnostics III. Diagnostic analgesia	Bodó – Szabó Izing
Oct 31 Nov 7	Operation on hoof and claws	Izing - Szabó
Nov 14, 21	Castration and ovariectomy of pig	Makra - Veres
Nov 28 Dec 5	Standing laparotomy of cattle	Bodó - Izing

Schedule:

* The first date means Group 1 and 2, the second date means Group 3 and 4 according to the following order:

8.15 – 11.45 : 1 Group or 3 or

12.00 – 15.30 : 2 Group or 4 or