



FACULTY OF VETERINARY MEDICINE

**DISSERTATION - JUNE 2025**  
**TOPICS AND REFERENCES**

**FUNDAMENTAL SUBJECTS – WRITTEN PART**

**I. ANATOMY**

**TOPICS**

- 1. Lymph System:** Lymph nodes topography and their afferent and efferent lymphatic vessels in the head, neck, forelimb and hindlimb, thoracic and abdominal cavity in species
- 2. The thoracic and abdominal viscera in animals:** Morphology of the thoracic and abdominal viscera in domestic animals; differentiation criteria in domestic mammals. Thoracic and abdominal viscera projection on the right and left thoracic and abdominal walls. Splanchnic vasculo-nervous structures and their distribution
- 3. The hypogastric region:** Inguinal region and the testicular pouch
- 4. The autopodial region in horses and cattle** (skeleton, the muscles and structure supporting, the vessels and nerves of the forelimb and the hindlimb)
- 5. Circulatory System. Heart and Arterial System**

**REFERENCES**

1. Dyce, M. K., Sack O.W., Wensing G.J.C., Textbook of Veterinary Anatomy. 3rd Ed. Sanders, USA, 2002
2. König, H.E.& Liebich, H.G. (2004) Veterinary Anatomy of Domestic Mammals, Textbook and Colour Atlas, ISBN 3-7945-2101-3
3. Spataru, M.C. (2019) Veterinary Anatomy, Splanchnology of domestic animals, Ed. ”Ion Ionescu de la Brad” din Iași, ISBN 978-973-147-349-9
4. Spataru Mihaela Claudia, Covasa Costica Toader, 2020, Veterinary Anatomy Practical guid of the Locomotor System, Editura „Ion Ionescu de la Brad” Iasi, ISBN 978-973-147-359-8



5. Spataru Mihaela Claudia, 2022, Circulatory System and Nervous System of domestic animals, Editura „Ion Ionescu de la Brad” Iasi, ISBN 978-973-147-460-1

Prof. Mihaela SPĂȚARU

## II. PHYSIOLOGY

### TOPICS

1. **Autonomic nervous system (ANS) physiology**
2. **Senses: vestibular system**
3. **Endocrine system physiology**
4. **Digestion**
5. **Fluids and cardiovascular system: blood physiology; heart physiology; blood vessel physiology**

### REFERENCES:

1. Iuliana Codreanu – Textbook of Animal Physiology, Ed. Printech, Bucuresti, 2018 (Physiology Library)
2. William O. Reece, Dukes’ Physiology of Domestic Animals, Wiley, Thirteenth Edition, 2015 (PDF)
3. Klein BG., Cunningham's Textbook of Veterinary Physiology, Elsevier Saunders, Fifth edition, 2013 (PDF)
4. Course notes (on Moodle platform).

Assoc. Prof. Geta PAVEL

## III. PATHOPHYSIOLOGY

### TOPICS

1. **Shock pathophysiology**
2. **Inflammation pathophysiology**
3. **Thermal homeostasis pathophysiology**
4. **Carbohydrates pathophysiology**
5. **Hydro-electrolytical and acid-base balance pathophysiology**



## REFERENCES

1. R.N. Malancus - Introduction To Pathophysiology – General Pathophysiology, Ed. Ion Ionescu de la Brad, 2021
2. R.N. Malancus – lecture notes

Assoc. Prof. Răzvan MĂLĂNCUȘ

## IV. PHARMACOLOGY

### TOPICS

#### Pharmacology

1. Nervous system medication
2. Diuretics and basic principles of fluid therapy
3. Cardiotoxic medication
4. Antimicrobial medication: antiseptics and disinfectants, sulfonamides, antibiotics
5. Pharmacology of antifungal agents

### REFERENCES

1. Valentin Năstasă, Robert Capota, 2023. General Veterinary Pharmacology, Ed. Ion Ionescu de la Brad, Iasi, ISBN: 978-973-147-503-5
2. Veterinary pharmacology & therapeutics. J.E. Riviere, M.G. Papich, Ed. Blackwell publishing, 2017
3. Veterinary drug handbook. D.C. Plumb, Ed. Blackwell publishing, 6-7 edition, 2016-2020
4. Electronic course and practical work support

Prof. Valentin NASTASĂ



## V. SEMIOLOGY

### TOPICS

- 1. General examination of the animal:** attitudes (postions) modifications; skin – functional and structural disorders; the gums (superficial mucoases); the lymph nodes
- 2. Urine examination:** chemical examination; the urinary sediment examination
- 3. Digestive apparatus examination:** the vomiting (emesis); oesophagus examination and semiology of it, stomach (in monogastrics) examination and semiology; physical exam of the liver at horse, cow and dog; functional exam of the liver; the intestines examination at horse, cow and dog
- 4. Cardiovascular apparatus examination:** heart auscultation (without arrhythmias, without cardiac pathologic sounds); heart special methods examination; arterial pulse examination
- 5. Nervous system examination:** the behaviour and the motility examination; sensitivity examination (without medullary syndromes)

### REFERENCES

1. Vulpe V., 2016 - General veterinary semiology, PIM, Iași
2. Vulpe V., 2020 – Veterinary examination of the organs and systems, PIM, Iași
3. Semiology Course Notes (presentations)

Prof. Vasile VULPE

## VI. PATHOLOGICAL ANATOMY

### TOPICS

- 1. Pathology of the heart**
- 2. Pathology of the arteries and veins**
- 3. Pathology of the spleen**
- 4. Lung pathology in mammals**
- 5. Kidney lesions**

### REFERENCES

1. Sorin-Aurelian Pașca – lectures lito, 2017
2. Jubb, Kennedy, Palmer – Pathology of Domestic Animals Vol. 2+3, Elsevier, 2007



3. Pașca Aurelian-Sorin – Pathological Anatomy - Practical Book for Foreigner Students, 2018, Ed. ”Ion Ionescu de la Brad” Iași, ISBN 978-973-147-301-7

Prof. Sorin PAȘCA

## VII. MICROBIOLOGY

### TOPICS

- 1. The concept of bacteria**
- 2. Morphology and biology of bacteria:** form and method of grouping bacteria; bacterial cell structure; physiology of bacteria
- 3. The influence of environmental factors on bacteria**
- 4. Notions of microbial ecology**
- 5. Special bacteriology:** genus Staphylococcus; genus Streptococcus; genus Bacillus; genus Clostridium; genus Mycobacterium; genus Escherichia; genus Salmonella; genus Proteus; genus Pasteurella; genus Brucella; genus Pseudomonas; genus Campylobacter; genus Leptospira; genus Listeria; genus Erysipelothrix

### REFERENCES:

- Cătălin Carp-Cărare, Eleonora Guguianu, Cristina Rîmbu, – Bacteriologie specială. Îndrumător de lucrări practice. Ed. "Ion Ionescu de la Brad", Iași, 2015 (English translation, electronic format)
- Cătălin Carp-Cărare - Microbiology Powerpoint presentations

Assoc. Prof. Cătălin CARP-CĂRARE



## SPECIALIZED SUBJECTS – PRACTICAL PART

### I. MEDICAL CLINIC AND CLINICAL LECTURES BY SPECIES

#### TOPICS

**1. Diseases of the digestive system:** diseases of the stomach in ruminant herbivores; diagnosis, aetiology, prophylaxis and treatment; colic syndrome in equines, pigs and carnivores; diagnosis and treatment of gastropathies and enteropathies (secreto-motor, topographic and inflammatory); enteritis of young mammals and poultry: diagnostic methodology, prophylaxis and control; basic principles of hydro-electrolytic and acid-base rebalancing

**2. Bronchopneumonia:** gangrenous bronopneumonia (ab ingestis); chronic alveolar pulmonary emphysema; diagnosis and therapeutic principles in bronchopneumonia

**3. Diseases of the cardiovascular system:** acute and chronic (congestive) heart failure syndrome; traumatic pericarditis; cardiac hypertrophy and dilatation; acute endocarditis; shock; diagnosis and treatment in anaemia

**4. Diseases of the urinary system:** nephropathies - symptoms, clinical and paraclinical diagnosis, treatment; urolithiasis in ruminants and domestic carnivores

**5. Diseases of the nervous system:** diagnosis and therapy of encephalopathies

#### REFERENCES

1. Anton Alina, Solcan Gh., 2019, Animal Internal Medicine. Digestive System Diseases Editura Ion Ionescu de la Brad, Iași, 388 pag, ISBN 978-973-147-305-5

2. Luminița Diana Hrițcu, 2019, Veterinary respiratory and cardiovascular medicine, Editura Ion Ionescu de la Brad, Iași

3. Michael D. Lorenz, Joan Coates, Marc Kent Handbook of Veterinary Neurology, 5th Edition ,Saunders, ISBN : 9781437706512

4. Nelson R., Couto G.-2016, Small Animal Internal Medicine- 4th edition, Academic press

Prof. Gheorghe SOLCAN  
Assoc. Prof. Luminița HRIȚCU  
Assoc. Prof. Mihai MUSTEAȚĂ



## II. SURGICAL CLINIC AND CLINICAL LECTURES BY SPECIES

### TOPICS

1. **Surgical infection:** aerobic infection, anaerobic infection, local infection, widespread infection

2. **Closed trauma and open trauma; Hemorrhage and hemostasis**

3. **Surgical diseases of the hoof and claw**

4. **Surgical diseases of the head, digestive tract and uro-genital tract**

5. **Muscles and tendons diseases**

### REFERENCES

- Burtan L., 2019 - Veterinary surgical propedeutics, Ed. Tehnopress, Iași,  
Dean A. Hendrickson, A.N. Baird, 2013 - Turner and McIlwraith's Techniques in Large Animal Surgery, Ed. Wiley-Blackwell  
Theresa Welch Fossum, 2019 - Small Animal Surgery, Ed. Elsevier

Assoc. Prof. Liviu BURTAN  
Assoc. Prof. Eusebie ȘINDILAR

## III. INFECTIOUS DISEASES, PREVENTIVE MEDICINE AND CLINICAL LECTURES BY SPECIES

### TOPICS

1. **Infectious diseases of bovines:** tuberculosis, enzootic bovine leukosis, bovine brucellosis, bovine campylobacteriosis, bovine salmonellosis, bovine pasteurellosis, anthrax, rabies, coliform mastitis, bovine contagious mastitis, streptococcal mastitis

2. **Infectious diseases of sheep and goat:** ovine brucellosis, contagious ram epididymitis, ovine campylobacteriosis, ovine salmonellosis, ovine pasteurellosis, anthrax, agalactiae mastitis, staphylococcal mastitis in sheep, caprine arthritis and encephalitis

3. **Infectious diseases of cats:** rabies, feline infectious peritonitis, feline panleukopenia, calicivirosis, herpesvirosis, feline leukemia infection, feline immunodeficiency viral infection.

2. **Infectious diseases of dogs:** canine brucellosis, canine leptospirosis, parvovirosis, Distemper disease, coronavirosis

3. **Infectious diseases of poultry and rabbits:** New Castle disease, fowl cholera, avian mycoplasmas, avian colibacillosis, pullorum disease, avian tuberculosis, avian leukosis, avian



infectious bronchitis, pigeon paramyxovirus infection, rabbit pasteurellosis, myxomatosis, rabbit hemorrhagic viral disease

#### REFERENCES

1. M.V.M.: The Merck veterinary manual. Merial Ltd., New York, 2018
2. Radostis, O. M.; Blood, D. C.; Gay, J., Veterinary Medicine Bailliere Tindall, New York, 2000
3. OIE - Manual of Diagnostic Tests and Vaccines for Terrestrial Animals.  
<https://www.oie.int/en/produit/manual-of-diagnostic-tests-and-vaccines-for-terrestrial-animals-2018>

Assoc. Prof. Oana TANASE  
Lecturer Florentina DARABAN

## IV. REPRODUCTION, REPRODUCTIVE DISORDERS AND CLINICAL LECTURES BY SPECIES

#### TOPICS

1. Peculiarities of the sexual cycle by species
2. Childbirth and the puerperal period
3. Pathology of the puerperal period
4. Ovarian diseases
5. Mastitis

#### REFERENCES

1. Ciornei S. 2021 - Reproductive biotechnologies, practical guide, Editura “Ion Ionescu de la Brad”, ISBN 978-973-147-435-9, in engleza Pg 250 B5
2. Hopper R.M (2015) - Bovine Reproduction, Edited by Hopper R.M., p. 456, 1st edition, 2015 by John Wiley & Sons, Inc. ISBN 978-1-118-47083-1

Assoc. Prof. Petru ROȘCA  
Assoc. Prof. Ștefan CIORNEI



## V. PARASITOLOGY AND CLINICAL LECTURES BY SPECIES

### TOPICS

**1. Protozoa:** eimeriosis in birds and mammals; cryptosporidiosis; giardiasis; toxoplasmosis, neosporosis

**2. Helminthoses:** trematodoses - fasciolosis, paramphistomosis, opisthorchosis; cestodoses and metacestodes - cestodes of ruminants, horses, carnivores (dogs and cats), birds, muscular cysticercosis, coenurosis, hydatidosis; nematodoses - dictyocaulosis of ruminants, cardio-respiratory nematodes of carnivores, syngamosis of birds, trichostongylidosis of ruminants, ascaridoses of mammals and birds, ancylostomosis of carnivores, telaziosis, trichinellosis

**3. Acarioses and entomoses:** scabies in mammals and birds; tick infestation; insect infestation - anoplura, malophaga and siphonaptera; miases

### REFERENCES

1. Bowman, D. Dwight. 2014 –Georgis` Parasitology for Veterinarians, 10th ed., Elsevier Saunders ISBN: 978-1-4557-4006-2.

2. Deplazes, P., Eckert, J., Mathis, A., Georg von Samson-Himmelstjerna, Zahner H. 2016 – Parasitology in Veterinary Medicine. Publisher :Wageningen Academic Publishers, Netherlands Record Number:20183101920, ISBN :9789086862740

3. Loker S.Eric, Hofkin V. Bruce. 2015 - Parasitology: a conceptual approach, Garland Science, Taylor & Francis Group, LLC, New York and London ISBN 978-0-8153-4473

Prof. Olimpia IACOB  
Assoc. Prof. Larisa IVĂNESCU