

Elements of animal pathology (4th YEAR, 2nd SEMESTER)

Credit value (ECTS) 2

Course category

Field subject (compulsory)

Course holder:

Professor Liviu MIRON, PhD

Subject objectives (course and applications)

The purpose of the course is the assimilation by the students of the knowledge concerning the pathology of farm animals, the concept of disease, elements of morphopathology, semiology, bacteriology, virology, and parasitology. Also, the students will be able to evaluate the disease by following specific steps: symptom, syndrome, diagnostic, prognostic, and treatment. Infectious, parasitic, and metabolism diseases will be presented in ruminants, swine, equines, birds, as well as the main zoonoses transmitted by carnivores and ticks.

The purpose of the practical activities is to familiarise the students with the techniques of contention of animals, of their clinical examination, as well as the methods of diagnostic and treatment. The students will visit animal farms and factories of compound feed, following the measures of biosecurity and management applied in these units.

Subject content (curriculum)

Course (Chapters/subchapters)
1. Introduction on farm animal pathology. Study subject. The concept of disease. Evolution of diseases. Elements of semiology. Symptom. Syndrome. Diagnostic. Prognostic. Treatment.
2. General elements of morphopathology. General elements of immunology. Natural immunity. Acquired immunity.
3. Classification of diseases. Infectious diseases – elements of bacteriology and general virology. Parasitic diseases - general elements.
4. Mycotic and mycotoxicological diseases – Definition and classification of fungi. Diseases of nutrition and metabolism. Definition and classification. Medical diseases - definition and classification. Food poisoning – definition and classification.
5. Vectors and vector diseases: general elements.
6. Infectious diseases specific to bovines (bacterial and viral): leptospirosis, anthrax, tuberculosis, brucellosis, blue tongue disease. Parasitic diseases of bovines: giardiasis and cryptosporidiosis, cysticercosis, fascioliasis, and scabies. Diseases of nutrition and metabolism specific to bovines: ricketts, ketosis, osteomalacia, pica syndrome, nutrition tetanus, mycotoxicosis, intoxication with urea.
7. Infectious diseases specific to swine (bacterial and viral): erysipelas, pasteurellosis, colibacillosis, swine flu. Parasitic diseases of swine: trichinellosis, sarcocystosis, cysticercosis, metastrongilosis, ascariasis. Diseases of nutrition and metabolism specific to swine: salt intoxication, ricketts, osteomalacia, mycotoxicosis.

8. Infectious diseases specific to equines (bacterial and viral): West Nile, equine flu, equine parainfluenza, tetanus, botulism. Parasitic diseases of equines: gastrophilosis, strongyloidiasis, oxiuriasis. Diseases of nutrition and metabolism specific to equines: colic syndrome, mycotoxicosis, laminitis.
9. Infectious diseases specific to birds (bacterial and viral): avian pseudopest, campylobacteriosis, mycoplasmosis, salmonellosis, avian flu, Marek's disease. Parasitic diseases of birds: coccidiosis, singamosis, ascariasis. Diseases of nutrition and metabolism specific to birds: rickets, perosis, pica syndrome, salt intoxication.
10. Diseases transmitted by carnivores, rodents, and ticks: rabies, echinococcosis, toxoplasmosis, ancylostomiasis, toxocariasis, filariasis, leptospirosis, bartonellosis, anaplasmosis, babesiosis, borreliosis.

Practical activities
1. Work safety measures. Ord. 19/1972. Approach and contention of the animals to be examined. Introduction regarding the clinical examination. General methods of examination.
2. Measures of biosecurity and management applied in animal farms.
3. Measures of clinical and paraclinical diagnostic of diseases in animals. Sampling, packaging, and delivery of pathological products in order to perform the paraclinical diagnostic. Modality of drug administration.
4. Clinical diagnostic of infectious, parasitic, nutritional, and metabolic diseases of ruminants.
5. Clinical diagnostic of infectious, parasitic, nutritional, and metabolic diseases of equines.
6. Clinical diagnostic of infectious, parasitic, nutritional, and metabolic diseases of swine.
7. Clinical diagnostic of infectious, parasitic, nutritional, and metabolic diseases of birds.

Bibliography

1. **Liviu Miron**, 2002, *Parazitologie veterinară*, Editura "Ion Ionescu de la Brad" Iași-Vol. 1, 198 p. ISBN 973-8014-81-6
2. Nicolae Constantin, 2014-*Tratat de Medicina Veterinara*, Vol.VI, Editura Risoprint, Cluj Napoca, 1338 p.
3. Tudor Perianu, 2011- *Tratat de Boli Infectioasa ale Animalelor- Bacterioze*, Vol. I, Editura Universitas, Iasi.
4. Tudor Perianu, 2011- *Tratat de Boli Infectioasa ale Animalelor- Viroze*, Vol. II, Editura Universitas, Iasi.

Final evaluation

Forms of evaluation	Modalities of evaluation	Percentage of final grade
Colloquium	Oral evaluation	60%
Assessment of the activity during the semester	Oral evaluation during the semester, group projects.	40%

Contact person

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