

CLINIC AND PATHOLOGY BY SPECIES

Study program	Veterinary Medicine
Year study	V
Semester	II
Regime of discipline	DOB
Category of discipline	Dsc
Number of lecture hours per week	-
Number of seminar/lab/project hours per week	6
Total number of hours according to the curriculum: lectures/seminars/laboratory/project	84
Number of transferable credits	5

SPECIFIC SKILLS

Professional competencies	<ul style="list-style-type: none"> Strengthen theoretical and practical knowledge of clinical examination of animals by acquiring specific diagnostic techniques. Explain the onset of clinical signs through the physiological and pathological mechanisms underlying the onset of medical, infectious, parasitic, surgical, nutritional, and reproductive diseases. Apply paraclinical diagnostic techniques and conduct a thorough clinical examination to establish and implement treatment as early and effectively as possible. apply therapeutic principles and drug administration techniques (route of administration, frequency and duration of treatment, retention) in accordance with the diagnosis and prognosis Epidemiological and metabolic monitoring of cattle herds, screening, prevention, and control of diseases, including zoonoses.
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LEARNING OUTCOMES

Knowledge	<p>Upon successful completion of the course, students should be able to:</p> <ul style="list-style-type: none"> Explain the etiology, epidemiology, and pathogenesis of the major diseases affecting domestic, wild, and companion animal species covered in the course. Describe the mechanisms of pathogen transmission at the individual and population levels. Identify the clinical signs, stages, and progression of the diseases covered in the course and correlate them with the underlying biological processes. Understand the principles of host-pathogen interaction, immunity, and the factors influencing susceptibility or resistance to disease. Explain the diagnostic methods used in investigating the diseases studied, including laboratory tests, molecular diagnostics, imaging, and field surveillance. Discuss prevention and control strategies, including vaccination, biosecurity, hygiene management, antiparasitic programs, and outbreak containment for the diseases covered in the course. Understanding the principles of therapeutic substance use and management, pharmacodynamics/pharmacokinetics, and mechanisms of antimicrobial resistance. Description of national and international legislation relevant to the control of the diseases studied, animal movement, and notifiable diseases. Explanation of outbreak investigation procedures, sample collection, identification of risk factors, and reporting obligations.
Skills	<p>Upon completion of the course, students should be able to:</p> <ul style="list-style-type: none"> Conduct clinical examinations focused on detecting signs suggestive of disease in the animals being examined. Collect, preserve, and transport biological samples in accordance with diagnostic standards. Apply appropriate diagnostic techniques and interpret laboratory results.

	<ul style="list-style-type: none"> • Assess the clinical status of individual animals and herds using clinical, epidemiological, and laboratory data. • Develop differential diagnoses for diseases based on clinical reasoning and pattern recognition. • Formulate prevention and control strategies tailored to specific pathogens, species, and production systems. • Evaluate the effectiveness of biosecurity measures at the farm, clinic, and population levels. • Participate in investigations of disease outbreaks, collect baseline data, and contribute to tracking and containment efforts. • Effectively communicate with animal owners, colleagues, veterinary authorities, and public health professionals regarding animal disease risks and management. • Apply the principles of responsible medication use, select appropriate treatment protocols, and avoid practices that promote antimicrobial resistance.
Responsibility and autonomy	<ul style="list-style-type: none"> • Application of diagnostic protocols <ul style="list-style-type: none"> – The student independently collects and handles biological samples in accordance with biosafety guidelines and selects the appropriate diagnostic tests. • Responsible interpretation of results <ul style="list-style-type: none"> – The student analyzes and interprets the results of hematological, microbiological, and serological tests, understanding their clinical implications. • Management of sick animal patients <ul style="list-style-type: none"> – Makes initial decisions regarding isolation, disease control, and basic therapeutic measures, with minimal supervision. • Implementation of biosecurity measures <ul style="list-style-type: none"> – Independently applies prevention and biosecurity measures in the clinic and on the farm, contributing to the reduction of transmission risk. • Antimicrobial stewardship <ul style="list-style-type: none"> – Uses antimicrobials responsibly, in accordance with the principles of evidence-based medicine and the fight against antimicrobial resistance. • Participation in outbreak investigations <ul style="list-style-type: none"> – Contributes responsibly to field activities (data collection, preliminary assessment, control recommendations). • Professional communication <ul style="list-style-type: none"> – conveys relevant information regarding the risk, prevention, and progression of animal diseases to owners, colleagues, and authorities.

DISCIPLINE OBJECTIVES

General objective	<ul style="list-style-type: none"> • Theoretical instruction and the consolidation of laboratory skills related to the clinical examination of animals, along with the development of the ability to interpret clinical signs in conjunction with paraclinical examinations, enable the establishment of a clinical diagnosis of diseases of the organs of the system, regardless of their causal nature, to prevent and combat them with maximum effectiveness. To ensure the necessary competencies to conduct scientific research in the field of veterinary medicine successfully.
Specific objectives	<ul style="list-style-type: none"> • Correctly use medical scientific language to describe medical, surgical, infectious, parasitic, and reproductive diseases in accordance with the algorithm (definition, etiopathogenesis, clinical and pathological changes, diagnosis, prognosis, course, prevention, treatment). • Explain the pathophysiological mechanisms leading to medical,

	<p>infectious, parasitic, surgical, nutritional, and reproductive conditions.</p> <ul style="list-style-type: none"> Reasoning based on the selective interpretation of clinical and laboratory results to confirm or rule out a diagnosis of infectious, parasitic, surgical, nutritional, and reproductive pathologies. Integrate theoretical knowledge with the practical results of clinical and paraclinical investigations to establish a diagnosis and implement appropriate therapeutic management for infectious, parasitic, surgical, nutritional, and reproductive conditions. Learn the formats and preparation of clinical documents (consultation records, observation forms, and addresses for sending blood, urine, fecal, and ruminal fluid samples, etc.). Consolidation of knowledge and skills in scientific research (theoretical and practical) regarding all diseases, regardless of their nature, in animals. <p>Knowledge of current legislation on the prevention and control of animal diseases.</p>
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CONTENTS

COURSE/LECTURES	Number of hours
-	0
SEMINAR/LABORATORY	Number of hours
CATTLE - 14 hours	
Epidemiological survey of cattle herds	1
Diagnosis, differential diagnosis, prevention, and treatment in the gastric compartments	3
Diagnosis, differential diagnosis, prevention, and treatment of diarrhea syndrome in newborns	2
Diagnosis, differential diagnosis, prevention, and treatment of respiratory diseases in young cattle	2
Diagnosis, differential diagnosis, prevention, and treatment of cardiovascular diseases	1
Diagnosis, differential diagnosis, prevention, and treatment of urinary disorders	1
Diagnosis, differential diagnosis, prevention, and treatment of disabling diseases	2
Immunoprophylaxis in cattle herds	2
SMALL RUMINANTS - 14 hours	
Epidemiological survey of sheep and goat herds	1
Differential diagnosis of digestive syndrome	2
Differential diagnosis in hepatic syndrome	1
Differential diagnosis in respiratory syndrome	2
Differential diagnosis in neurological syndrome	1
Differential diagnosis in diseases of the circulatory system	1
Curative and preventive therapy on sheep and goat farms	1
Veterinary health monitoring of sheep and goat herds	2
Immunoprophylaxis in sheep and goat herds	3
PIGS - 14 hours	
Epidemiological survey of diseases in the pig population. Methods and techniques of serological diagnosis in swine diseases	1
Health and veterinary surveillance of pigs Clinical and differential diagnosis of systemic diseases in pigs	1
Health and veterinary surveillance of pigs Clinical and differential diagnosis of systemic diseases in pigs	1
Clinical and differential diagnosis in gestational piglets	1
Clinical and differential diagnosis of gastroenteropathy in young pigs after weaning	1
Clinical and differential diagnosis of respiratory disorders in pigs	1
Clinical and differential diagnosis of abortion in pigs	1
Epidemiological surveillance, prevention, and control of diseases in the pig population	1
Differential pathological diagnosis in systemic diseases of pigs	1
Differential pathological diagnosis in gestational piglets	1
Differential pathological diagnosis in gastroenteropathy of young pigs after weaning	1

Differential pathological diagnosis of respiratory disorders in pigs	1
Differential pathological diagnosis of abortion in pigs	1
Principles of therapy in swine diseases. Immunoprophylaxis in swine pathology	1
POULTRY - 14 hours	
Workplace safety training	1
Epidemiological survey of poultry flocks	1
Methods and techniques for serological diagnosis of poultry diseases	1
Veterinary Health Surveillance of Poultry	1
Clinical and differential diagnosis of diseases in broiler flocks	1
Clinical and differential diagnosis of diseases in poultry raised on commercial farms	1
Clinical and differential diagnosis in laying hens	1
Differential diagnosis and treatment of diseases in pet birds	1
Immunoprophylaxis in avian pathology	1
Differential histopathological diagnosis in diseases of broiler flocks	1
Differential pathological diagnosis of diseases in poultry raised on commercial farms	1
Differential pathological diagnosis in laying hens	1
Differential diagnosis and treatment of diseases in pet birds	1
Immunoprophylaxis in avian pathology	1
COMPANION ANIMALS – 14 hours	
Diagnosis, differential diagnosis, prevention, and treatment of gastrointestinal syndromes	2
Diagnosis, differential diagnosis, prevention, and treatment of heart failure syndrome	2
Diagnosis, differential diagnosis, prevention, and treatment of renal failure syndrome	2
Diagnosis, differential diagnosis, prevention, and treatment of growth osteodystrophy	2
Diagnosis, differential diagnosis, prevention, and treatment of feline urological syndrome	2
Presentation of the report and compliance with the required criteria	4
EQUINES - 14 hours	
Initial clinical assessment of the equine patient: vital signs, mucosal examination, heart rate, cardiac and respiratory auscultation	2
Clinical management of colic in equines: history-taking, systematic clinical examination, abdominal auscultation, pain assessment, abdominal ultrasound (FLASH technique). Basic clinical procedures in equines: intravenous catheterization, collection of biological samples, and administration of treatments.	2
Nasogastric tube technique in equines and its role in the diagnosis and management of colic	1
Transrectal examination in equines – principles, anatomical landmarks, and clinical indications. Skills development using the equine palpation colic simulator (clinical simulation training)	3
Stabilization and immobilization of traumatized limbs in horses (management of fractures and patient transport)	2
Clinical evaluation of the newborn foal (equine neonatology): neonatal examination, neonatal reflexes, assessment of passive transfer of immunity	2
Assessment of clinical skills in equine medicine students (clinical skills assessment / OSCE): clinical examination of equines, management of colic, identification of anatomical structures during transrectal examination on a simulator, and interpretation of common clinical scenarios	2
TOTAL HOURS	84

BIBLIOGRAPHY:

▪ **Cattle**

1. Morariu, S. – 2013 – Dermatologie veterinară, Ed. Eurostampa, Timișoara.
2. Falcă, C. (coord.) – 2011-Medicina internă a animalelor, Ed. Eurostampa, Timișoara
3. Ettinger, S.J., Feldman, E.C. -2010- Veterinary internal medicine, Ed. Saunders
4. Moț, T., Petrusc Cristina – 2009 – Patologie medicală veterinară, Ed. Eurobit, Timișoara
5. Nelson, R.W., Couto, C.G. – 2009 – Small animal internal medicine (4th edition), Ed. Mosby
6. Moț, T., Morar, D., Cristescu, M., Ciulan, V., Simiz, F. – 2007 – Patologie medicală veterinară, Ed. Eurobit, Timișoara
7. Pop, P., Morar, D., Moț, T., Ciulan, V., Cristescu, M., Simiz, F. -2003 – Patologie medicală pe specii, Ed. Mirton, Timișoara.
8. Cristina, R.T. – 2006 - Introducere în farmacologia și terapia veterinară, Ed. Solness, Timișoara
9. Dărăbuș, Gh., Oprescu, I., Morariu, S., Mederle Narcisa – 2006- Parazitologie și boli parazitare, Ed. Mirton, Timișoara

10. Willard, M.D., Tvedten, H. -2004- Small animal clinical diagnosis by laboratory methods (4th edition), Ed. Saunders
 11. Falcă, C., Moț, T. – 2002 – Urologie veterinară, Ed. Artpress, Timișoara
 12. Falcă, C. (coord.) – 2011-Medicina internă a animalelor, Ed. Eurostampa, Timișoara
 13. Herman, V. -2002- Patologie pe specii-Boli infecțioase, Ed. Waldpress, Timișoara
 14. Vior, C., Cătană, N., Cosoroabă, I., Dărăbuș, Gh., Nicolae, Ș., Popovici, V., Țibru, I. – 2002 – Elemente de epidemiologie a bolilor transmisibile, Ed. Orizonturi universitare, Timișoara
 15. Moga-Mânzat, R. – 2001 – Boli infecțioase ale animalelor, Ed. Brumar, Timișoara.
 16. Moț, T. – 2001 –Patologie medicală veterinară (Aparatul respirator și cardiovascular), Ed. Solness, Timișoara
 17. Pop, P. – 1999 – Boli de nutriție și metabolism la animale, Ed. Mirton Timișoara
 18. Cătană, N. – 1998 – Infecțiile respiratorii ale tineretului bovin, Ed. Brumar, Timișoara
 19. Ghergariu, S. – 1995 –Patologia nutrițională și metabolică a animalelor, Ed. Did. și Pedag., București
 20. Ghergariu, S. – 1995- Bazele patologiei medicale a animalelor (vol. I, II), Ed. All, București
 21. Trif Alexandra – 1993 – Terapia urgențelor toxicologice la animale, Ed. Mirton, Timișoara
- **Small ruminants**
1. Bercea, I.; Mardari, A.; Moga Mânzat, R.; Pop, M.; Popovici, A. - Bolile infecțioase ale animalelor domestice, Ed. didactică și pedagogică, București, 1981.
 2. Cătană, N. - Viroze, Ed. Waldpress, Timișoara.2002.
 3. Cosoroabă, I. - Parazitologie veterinară, ED. Mirton, Timișoara, 2000.
 4. Cosoroabă, I.; Dărăbuș, Gh.; Oprescu, I. - Compendiu de parazitologie veterinară, Ed. Mirton, Timișoara, 1994 (vol.I) - 1995 (vol.II).
 5. Cristina, R.T. Introducere în farmacologia și terapia veterinară, Ed. Solness, Timișoara, 2006.
 6. Cristina, R.T.; Teușdea, V. – Ghid de farmacie și terapeutică veterinară, Ediția 3, Editura Brumar, Timișoara, 2008.
 7. Dărăbuș, Gh.; Matiuți, M.; Țibru, I. - Ghid de creștere și patologie a ovinelor și caprinelor, Ed. Brumar, Timișoara, 1999.
 8. Dărăbuș, Gh.; Oprescu, I.; Morariu, S.; Mederle Narcisa – Parazitologie și boli parazitare, Ed. Mirton, Timișoara, 2006.
 9. Dărăbuș, Gh.; Oprescu, I.; Morariu, S.; Mederle Narcisa; Ilie, M.S. – Ghid practic în bolile parazitare (vol. 2), Ed. Agroprint USAMVB, Timișoara, 2014.
 10. Dărăbuș, GH.; Oprescu, I.; Morariu, S.; Mederle Narcisa; Ilie, M.S. – Ghid practic în bolile parazitare (vol. 1), Ed. Agroprint USAMVB, Timișoara, 2013.
 11. Falcă, C.; Ciorba, GH. - Tehnici de examinare clinică și paraclinică la animale, Ed. Mirton, Timișoara, 2003.
 12. Falcă, C. – Medicina internă a animalelor. Vol. I *II. Editura Eurostampa, Timișoara, 2011.
 13. Herman, V. - Patologie pe specii - Boli infecțioase, Ed. Waldpress, Timișoara, 2002.
 14. Mânzat-Moga, Radu – Boli infecțioase ale animalelor, Editura Brumar, Timișoara 2001.
 15. Mânzat-Moga, Radu – Boli virotice și prionice ale animalelor Editura Brumar, Timișoara 2005.
 16. Morariu, S. – Dermatologie veterinară, Editura Artpress, Timișoara, 2007.
 17. Morariu, S. – Dermatologie veterinară, Editura Eurostampa, Timișoara, 2013.
 18. Oprescu, I. - Compendiu de patologia rumegatoarelor mici, Editura Mirton, Timișoara, 2017.
 19. Oprescu, I. – Bolile oilor și caprelor. Editura Mirton, Timișoara, 2022.
 20. Perianu, T. Tratat de boli infecțioase ale animalelor. Bacterioze. Vol. I. Editura Universitas XXI, Iași, 2011.
 21. Perianu, T. Tratat de boli infecțioase ale animalelor. Viroze și boli prionice. Vol. II. Editura Universitas XXI, Iași, 2012.
 22. Pop, P. - Boli de nutriție și metabolism la animale, Ed. Mirton, Timișoara, 1999.
 23. Pop, P.; Morar, D.; Moț, T.; Ciulan, V.; Cristescu, M.; Simiz, F. - Patologie medicală pe specii, Ed. Mirton, Timișoara, 2003.
 24. Șuteu, E.; Cozma, V. - Bolile parazitare la animalele domestice, Ed. Ceres, București, 1998.
 25. Trif Alexandra - Terapia urgențelor toxicologice la animale, Ed. Mirton, Timișoara, 1993.
 26. Vior, C.; Cătană, N. Cosoroabă, I., DĂRĂBUȘ, GH., Nicolae, Ș., PopovicI, V., Țibru, I. - Elemente de epidemiologie a bolilor transmisibile, Ed. Orizonturi universitare, Timișoara, 2002.
 27. Constantin, N. (Coordonator) – Tratat de Medicină Veterinară, Vol. VI. Ed. Risoprint, Cluj-Napoca, 2014.
 28. Oprescu, I.- Repertoar de parazitologie, Editura Mirton Timisoara, 2020.
- **Pigs and Poultry**
1. Bercea, I., Mardari, A., Moga Mânzat, R., Pop, M., Popoviciu, A. - Boli infecțioase ale animalelor domestice, Ed. did. și ped., București, 1981
 2. Brugere, Jeanne, Silim, A., - Manuel de pathologie aviare, ENV Alfort, France, 1992
 3. Calnek, B.W., - Diseases of Poultry, 10th edition, Iowa State University Press, Ames, Iowa, USA, 1997
 4. Cătană, N., - Viroze, Ed. Waldpress Timișoara, 2002
 5. Cosoroaba, I., Darabus, G., Oprescu, I., - Compendiu de parazitologie veterinară, Ed. Mirton, Timișoara, 1995, vol. I și II
 6. Falca, C., Ciorba, G., - Tehnici de examinare clinică și paraclinică la animale, Ed. Mirton, Timișoara, 2003
 7. Herman, V. – Patologie pe specii – Boli infecțioase, Ed. Waldpress Timișoara, 2002
 8. Moga Mânzat, R. - Curs de boli infecțioase ale animalelor, bacterioze, Lito I.A. Timișoara, 1987
 9. Moga Mânzat, R. - Curs de boli infecțioase ale animalelor, viroze, vol. III, IV, Lito I.A. Timișoara, 1989

10. Moga Mânzat, R., HERMAN, V., RĂMNEANȚU, M. – Diagnosticul în boli infecțioase comune mai multor specii de mamifere, Ed. Brumar Timișoara, 2000
11. Pop, P., - Boli de nutriție și metabolism la animale, Ed. Mirton, Timișoara, 1999
12. Pop, P., Morar, D., Moț, T., Ciulan, V., Cristescu, M., Simiz, F., - Patologie medicală pe specii, Ed. Mirton, Timișoara, 2003
13. Trif, Alexandra, - Terapia urgențelor toxicologice la animale, Ed. Mirton, Timișoara, 1993
14. Vior, C., Catana, N. (sub redacția) – Elemente de epidemiologie a bolilor transmisibile, Ed. Orizonturi universitare, Timișoara, 2002
 - **Companion Animals**
 - 1. Moț, T., Morar, D., Cristescu, M., Ciulan, V., Simiz, F. – (2007) – Patologie medicala veterinară, Ed. Eurobit, Timișoara.
 - 2. Pop, P., Morar, D., Moț, T., Ciulan, V., Cristescu, M., Simiz, F. – (2003)- Patologie medicală pe specii, Ed. Mirton, Timișoara.
 - 3. Falcă C. (2011) – Medicina internă a animalelor, vol. I, II, Ed. Eurostampa, Timișoara.
 - 4. ETTINGER, S., FELDMAN, E.- *Textbook of Veterinary Internal Medicine - Diseases of the Dog and Cat, 4th edition*, vol. II, Ed. W. B. Saunders Company, Philadelphia, London, Toronto, Sydney, Tokyo, 2010.
 - 5. Falcă, C., Moț T., - *Urologie veterinară*, Ed. Artpress, Timișoara, 2002
 - 6. Ghergariu, S. –(1995) – *Bazele patologiei medicale a animalelor* (vol. I, II), Ed. All, București.
 - 7. Moț T., Falcă, C., - *Elemente de neurologie veterinară*, Ed. Augusta, Timișoara, 2003.
 - 8. Meyer, D. J., Harvey, W. J. (2004) – *Veterinary laboratory medicine – Interpretation and diagnosis*, 3rd edition, Ed. Saunders
 - **Equine**
 - 1. Reed, S.M., Bayly, W.M., Sellon, D.C. (2017) – *Equine Internal Medicine*, 4th Edition. Elsevier, St. Louis.
 - 2. Orsini, J.A., Divers, T.J. (2014) – *Equine Emergencies: Treatment and Procedures*, 4th Edition. Elsevier, St. Louis.
 - 3. Auer, J.A., Stick, J.A. (eds.) (2019) – *Equine Surgery*, 5th Edition. Elsevier, St. Louis.
 - 4. Costa, L.R.R., Paradis, M.R. (eds.) (2011) – *Manual of Clinical Procedures in the Horse*. Wiley-Blackwell, Ames.
 - 5. Wong, D.M., Wilkins, P.A. (eds.) (2024) – *Equine Neonatal Medicine*. Wiley-Blackwell, Hoboken, NJ. ISBN: 978-1-119-61723-5.
 - 6. Smith, B.P. (2020) – *Large Animal Internal Medicine*, 6th Edition. Elsevier, St. Louis.
 - 7. Sellon, D.C., Long, M.T. (eds.) (2013) – **Equine Infectious Diseases**, 2nd Edition. Elsevier Saunders, St. Louis.
 - 8. Wright, I. M. (ed.) (2022) – *Fractures in the Horse*. Wiley-Blackwell, Hoboken, NJ. ISBN: 978-1-119-43175-6

ASSESSMENT

Activity type	Activity type	Activity type	Activity type
Course/Lectures	-	-	-
Seminar/laboratory/clinical sessions	Adherence to the clinical plan for the examination and completion of the observation sheet, or preventive care programs, or a case study	Preparation and presentation: -Scientifically reviewed. -Immunoprophylaxis program. -Observation sheet	100%
Other activities	-	-	-

Course coordinator:

Senior Lecturer Corina Alexandra BADEA

Practical activities coordinator L/S/P:

Assoc. Prof. Dr. Ionica IANCU, Senior Lecturer Dr. Cristina VĂDUVA, Senior Lecturer Dr. Florin SIMIZ, Assist. Prof. Vlad IORGONI, Assist. Prof. Paula NISTOR, Assist. Prof. Anamaria PLESKO