

ORTHOPEDICS IN LIVESTOCK

Study program	Veterinary Medicine
Year of study	V
Semester	II
Regime of discipline	DOP
Discipline category	Dsf
Number of lectures hours per week	1
Number of seminar/laboratory/project hours per week	2
Total number of hours according to the curriculum: lectures/seminars/laboratory/project	14 hours of lectures/ 28 hours of laboratory
Number of transferable credits	2

SPECIFIC SKILLS

Professional Competence	<p>C1: Examination, diagnosis, prevention, and treatment through medical and surgical means of diseases/syndromes affecting animals: Acquiring knowledge in the field of orthopedics in farm animals. Consolidation of practical skills for performing clinical examinations, exploratory diagnostic procedures, and selecting specific therapeutic procedures for musculoskeletal disorders in farm animals. Ability to complete medical records.</p>
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LEARNING OUTCOMES

Knowledge	<p>C1. Describe the clinical anatomy and biomechanics of the locomotor system in horses and cattle, with an emphasis on the structures of the hoof and claws. C2. Explain the etiology, pathogenesis, clinical picture, and evolution of the main orthopedic conditions in farm animals (lameness, pododermatitis, felon, sole ulcer, navicular disease, fractures, dislocations, tendinitis). C3. Know the clinical and paraclinical diagnostic methods used in livestock orthopedics (lameness examination, diagnostic trunk anesthesia, radiological evaluation). C4. Describe the principles of conservative and surgical treatment in orthopedic conditions, including functional and orthopedic trimming techniques, hoof/cloven hoof interventions, and common surgical procedures.</p>
Skills	<p>A1. Correctly perform clinical orthopedic examination in horses and cattle, identifying the degree and type of lameness. A2. Apply diagnostic techniques using trunk anesthesia and interpret the clinical response. A3. Performing, under supervision, specific therapeutic procedures: functional and orthopedic trimming, treatment of foot lesions, application of dressings, and performing routine surgical procedures on hooves/claws. A4. Interpretation of radiographic images of the limbs and integration of clinical data in establishing the diagnosis and therapeutic conduct.</p>
Responsibility and autonomy	<p>R1. Ability to make informed therapeutic decisions in orthopedic cases of low and medium complexity, in accordance with animal welfare principles. R2. Ability to communicate effectively with farm owners or managers regarding diagnosis, treatment options, prognosis, and necessary preventive measures. R3. Autonomy in monitoring the post-therapeutic evolution of orthopedic cases and in identifying situations that require referral to a specialist or advanced surgical intervention. R4. Ability to work as part of a team in clinical and surgical activities, assuming professional responsibility within the limits of acquired competence.</p>

COURSE OBJECTIVES

General objective of the course	<ul style="list-style-type: none"> • The study of specific surgical conditions of the musculoskeletal system in farm animals:
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	- learning about specific disorders; participation in solving clinical cases
Specific objectives	<ul style="list-style-type: none"> • Knowledge of surgical disorders of the musculoskeletal system in horses and cows. • Strengthening practical skills for examining clinical cases, establishing diagnoses, and developing treatment plans; monitoring cases. Assessing lameness in dairy farms. Working in a surgical team.

COURSE CONTENT

LECTURES	Number of hours
<p>Chapter I. Locomotor disorders in horses. Clinical anatomy of the hoof. Examination of lameness. Full hoof. Hoof wall. Hoof sole. Rotten fork. Wall separation. Tickling. Sole lesions. Exongulation. Aseptic pododermatitis. Diffuse aseptic pododermatitis. Bleima. Coronary band. Cherafilocelul. Cheracelul. Crapodina. Crapodul. Cartilaginous javart. Ossification of complementary cartilages. Naviculartritis. Hoof sprain. Hoof dislocation. Distal phalanx fracture. Traumatic suppurative pododermatitis. Normal shoeing. Orthopedic shoeing. Proximal fixation of the patella. Ring ligament stricture. Carpal tunnel syndrome. Bursitis, tendinitis of the medial dorsal branch of the cranial tibial muscle.</p>	8
<p>Chapter II. Locomotor disorders in cattle. Clinical anatomy of the hooves. Examination of lameness. Panaritium. Hoof rot. Acute furuncle. Chronic furuncle. Sole ulcer. Interdigital vegetative dermatitis. Seimele. Exongulation. White line disease. Traumatic suppurative pododermatitis. Distal phalanx fracture. Hoof deformation. Interdigital phlegmon.</p>	6
SEMINAR/LABORATORY	Number of hours
<p>1. Equines: Trunk anesthesia for diagnostic purposes in lameness. Intrasynovial anesthetic injections. Hoof surgery. Palmar digital neurectomy. Desmotomy of the accessory ligament of the deep digital flexor and the plantar ligament. Treatment of proximal patella fixation in horses (patellar desmotomy). Deep flexor tenotomy. Surgical technique for palmar/plantar ligament constriction. Cuneiform tenectomy. Surgical technique for rudimentary metacarpal/metatarsal bone fractures. Radiographic evaluation of horse limbs.</p>	14
<p>2. Cattle: Functional and orthopedic trimming. Hoof surgery: methods of toe amputation. Resection of the deep digital flexor tendon. Amputation of the accessory toe in cattle. Arthrodesis of the distal interphalangeal joint in cattle. Intrasynovial anesthetic injections.</p>	14

BIBLIOGRAPHY:

1. MANDATORY

Course notes; Course material – electronic support

Constantin N. (coordinator) - Treatise on Veterinary Medicine, vol. 5, Ed. Tehnică, Bucharest, 2009.

2. SUPPLEMENTARY

Auer J. A. – Equine surgery, Ed. W. B. Saunders Comp., Philadelphia, 1993 (course library)

Weaver D. – Bovine Surgery and Lameness, Ed. Blackwell Scientific Publication, Boston, 1986 (course library)

ASSESSMENT

Activity type	Assessment criteria	Assessment methods	Percentage of final grade
Lectures	The ability to document, systematize, and present information is assessed.	Oral presentation – PowerPoint presentation – of a pre-established topic from the course syllabus.	50%
Seminar/laboratory/clinical sessions	The ability to evaluate clinical cases and perform specific surgical procedures and techniques is assessed.	In at least 4 practical sessions, the student's work is assessed (direct observation, oral questioning). The arithmetic mean of the grades represents the grade for the practical exam.	50 %
Other activities			

Course coordinator: Assist. Prof. Dr. Cireșan Alexandru.....

Practical activities coordinator L/S/P: Assist. Prof. Dr. Cireşan Alexandru.....