

**Course: Pathology, HORSE MEDICAL PATHOLOGY, CLINIC AND THERAPY**  
**(2 CFU; 50 hours; lectures: 18 hours; Practical activities 8 [x4] 32 hours)**

**LECTURES**

Themes and learning outcomes	Topics	Specific contents	hours
<b>Course presentation</b>		The introduction is aimed at illustrating the learning objective, the organization and the assessment methods.	1/2
<b>1. PRACTICAL ISSUES OF THE EQUINE PRACTITIONERS</b>  <b>Gain of:</b> a) Knowledge of the laws concerning the drug utilization b) Ability to writing a prescription for horse using letterhead or official forms c) Knowledge of all the fulfilments related to the prescription of drugs in horses d) Ability of accomplishing a buying and selling visit of a horse.	Drugs prescription and utilization in equine medicine	The current laws concerning the prescription and use of drugs in both equids intended for human consumption and equids not for human consumption. Off-label use. Permitted medications in horses . Official forms prescriptions and letterhead prescription. Prescription repeatability.	1
	Legal aspects in visiting a buying and selling horse	Buying and selling visit of the horse	1
<b>2. PREVENTIVE MEDICINE</b>  <b>Gain of:</b> a) Knowledge of the Prophylaxis protocols. b) Knowledge of the vaccination rules of UNIRE and FISE competitions. c) Knowledge of the pathological bases, signs and symptoms and management of hereditary diseases of the horse. d) Ability to choose and plan a specific vaccination protocol. e) Ability to choose and plan a specific prophylaxis protocol for endoparasites f) Ability to interpret the genetic test, to treat the hereditary disease and how to manage breeding strategies. g) Ability to update its own knowledge about the knowledge of genetic disease and availability of genetic	Vaccination and medical prophylaxis of endoparasites in horses	Vaccination protocols for the horse. Mandatory vaccination for UNIRE an FISE competitions. Vaccines available for the horse. Prophylaxis strategies for the control of endoparasites in the horse.	1/2
	Equine clinical genetics	Equine genome. Quantitative and Mendelian traits. Hereditary patterns of genetic disease. Diagnosis od genetic diseases. Breeding strategies for the management of genetic disease whose the causative mutation is known	2

testing			
<b>3. EQUINE CLINICAL-PATHOLOGY</b> <b>Gain of</b> <b>a)</b> Knowledge of the peculiarity of equine clinical pathology <b>b)</b> Ability to interpret the clinico-pathological data	Hematology	Features of equine hematology. Causes of anemia and how to interpret the erythron changes. Interpretative patterns of leukograms. Clinical approach to anemia, leucocytosis and leukopenia	1
	Clinical chemistry, electrophoresis and coagulation	How to interpret clinic-pathological data in equine internal medicine. How to diagnose liver diseases, myopathies, disseminated intravascular coagulation and nephropathies. The prognostic indicators in equine colic.	1
<b>a) DISORDERS SUSCEPTIBLE OF MEDICAL TREATMENT IN THE HORSE</b> <b>Gain of:</b> <b>a)</b> Knowledge of the physiopathological basis, clinics and therapy of diseases susceptible of medical treatments	Hematologic diseases	Clinics, Epidemiology, signs and symptoms, diagnosis and therapy of infectious hematological disease: Babesiosis, Theileriosis, Anaplasmosis, Borrelia, and Infectious Anemia	1/2
	Nervous system	West Nile Disease in the horse: etiology, epidemiology, sign and symptoms, diagnosis, therapy and prevention. Overview of the signs of nervous system in the horse and how to perform a neurological examination	1
	Respiratory system	How to perform a physical examination of the respiratory system in the horse. The clinics of the recurrent Airway Obstruction. Ancillary methods for diagnosing respiratory disease. The lower respiratory tract disorders.	2
	Cardio-circulatory system	How to perform a physical examination of the cardio-circulatory system in the horse. The ECG and echocardiography as aids for diagnosing heart diseases. Therapy of equine arrhythmias	2

<b>4. SPORT MEDICINE</b> <b>Gain of:</b> a) Knowledge of the principles of equine sport medicine and horse athletic performances. b) Knowledge of the International doping rules and how to prescribe and use drugs the athletic horse.	Physiopathology of conditioning in the athlete horse	Physical adaptations to the training programs.	1/2
	Assessment of athletic potential and training methods of the athlete horse	Indicators of athletic capability and of training progresses in the horse. Training methods in regard to the event in which the horse will be competing	1/2
	Clinical approach to poor performance in the horse	Definition of poor performance. Clinical approach to poor performance. Diagnostic algorithm Of poor performance. Causes of poor performance related to the horse conditioning program.	1/2
	Doping in the athlete horse	Doping in the horse. Scope and use. The antidoping rules of FEI. The use of drugs included in the banned or restricted lists of drugs.	1/2
<b>5. MEDICAL TREATMENTS</b> <b>Gain of:</b> a) Knowledge of the indications and principles of rationale use of the medical treatments	Transfusion and regenerative medicine in the horse	Equine blood groups. Indications of the use of blood components in equine medicine. Blood transfusion reactions. How to assess blood compatibility.	1
	Antibiotic therapy	Practical approach to the use of antimicrobial therapy in the horse. Rationale for the choice of the antibiotics. Indications and common adverse reactions of antimicrobials.	1 1/2
	Fluid therapy	Indications for fluid therapy. Signs of dehydration and electrolytes imbalances. Parenteral and per os methods for administering fluids to the horse. Choice of the fluid. How to plan and monitor the effectiveness of fluid therapy.	1
<b>Practical lessons</b>			

Themes and learning outcomes	Topics	Specific contents	hours
<b>Gain of:</b> <i>A. Ability to perform the physical examination of the cardio-circulatory and respiratory systems and to collect and organize all the elements to achieve a correct diagnosis</i> <i>B. Ability to perform laboratory procedures useful in the equine practice</i> <i>C. Ability to choose a correct medical therapy and to correctly prescribe its use in the horse under the current laws.</i>	Clinical approach to the respiratory system	The practical lecture is organized in small groups each one under the supervision of a different tutor and is aimed at supporting the students in performing the physical examination of the respiratory systems of different horses. Furthermore, the students could assist the collection of the bronco-alveolar fluids and the performing of an endoscopic examination.	2
	Clinical approach to the cardio-circulatory system	The practical lecture is organized in small groups each one under the supervision of a different tutor and is aimed at supporting the students in performing the physical examination of the cardio-circulatory systems of different horses. Furthermore, the students could assist the performing of the ECG exam in a horse.	2
	Problem solving: how to prescribe drugs to horses and relative fulfilments	Some simulated clinical cases are administered to the students who are required to discuss together the case and to choose a medical therapy and to write a prescription.	2
	The clinical-pathology in equine practice	The students are required to prepare cytological slides of broncoalveolar fluid by cyto centrifugation and to stain them. Furthermore, the students are required to stain slides with Gram staining.	2