

Course Unit Descriptor

Study Programme: Veterinary medicine			
Course Unit Title: Laboratory technics in pathophysiology			
Course Unit Code: 3IVM5I91			
Name of Lecturer(s): Branislava Belić, Marko Cincović			
Type and Level of Studies: Undergraduate Academic Studies			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face to face			
Number of ECTS Allocated: 3,5			
Prerequisites: Laboratory technics in pathophysiology			
Course Aims: The aim of this course is that student acquire: 1) knowledge of basic laboratory techniques in the pathological physiology and their properties, such as separation and measurement techniques which are applied to the biological materials and on living animals, 2) the skills of proper implementation of certain laboratory techniques, 3) The ability to analyze the results obtained by different laboratory measurements.			
Learning Outcomes: After completing the course the student will be able to: 1) define and collect materials for a variety of laboratory tests, 2) perform the most commonly used analysis, 3) interpret the basic methodological procedures, 4) explain the results, 5) implement different methods in their daily work, 6) analyze the the results and errors made in the work			
Syllabus: <i>theory</i> Place pathophysiological-clinical laboratories in the daily work of a veterinarian; The organization of veterinary pathophysiological laboratories; Preparation of samples for analysis in the clinical laboratory; spectrophotometric methods in; Electrochemical methods; osmometry; Enzymatic analysis; Imunihemijske methods; Dry chemistry; Electrophoretic methods; chromatography; DNA analysis techniques; Hematology analyzers; Automation in the laboratory; Importantly laboratory procedures in the diagnosis of certain bolsnih states and processes; Proper analysis of laboratory results - upotrebljvost clinical diagnostic tests; The accreditation of veterinary clinical laboratories - rules and procedures. <i>Practical teaching:</i> Exercise, Other modes of teaching, Study research work Introduction to basic elements of the main and auxiliary laboratory apparatus; The impact of poor preparation of the sample to the laboratory results-importance hemolysis; Determination of blood counts conventional microscopic examination and by using analyzers; Performing important biochemical reactions for the determination of protein concentration, glucose, urea, AST, ALT and manually in an automated procedure; Identification and measurement of protein by ELISA method; Perform electrophoresis in changing conditions; Management of laboratory work and principles of automation; The case studies in order to ensure proper interpretation of laboratory findings.			
Required Reading: Belić B., Cincović R.M. (2012) Praktikum iz patološke fiziologije, Poljoprivredni fakultet Novi Sad Štraus B. i sar (1997) Analitičke tehnike u kliničkom laboratoriju, Medicinska naklada, Zagreb			
Weekly Contact Hours:		Lectures: 2	Practical work: 2
Teaching Methods: Lectures, Practice/ Practical classes, Consultations, study, research work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	70
Practical work	20	oral exam	
Preliminary exam(s)	5	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			