

Jordan University of Science and Technology
Faculty of Veterinary medicine
Department of Veterinary Pathology and Public Health
VM 553
Spring Semester 2021

Course Information	
Course Title	Clinical Chemistry and cytology
Course Number	VM 553
Prerequisites	Vm 352
Course Website	-----
Instructor	Dr. Raida Al-Rukibat
Office Location	G1 L3
Office Phone	22008
Office Hours	Sunday, Monday ,Tuesday & Thursday (morning)
E-mail	ralrukib@just.edu.jo
Teaching Assistant	-----
Course Description	
<p>This course will focus on understanding the diagnostic and prognostic value of pertinent laboratory tests as aids in the medical management of clinical cases. Interpretation of alterations in cytological samples from various organ systems, and chemical data derived from blood serum or other body fluids is provided. Extensive use is made of clinical cases to emphasize correct interpretation of reports.</p>	

Text Book	
Title	Veterinary Laboratory Medicine: Clinical Pathology.
Author(s)	Duncan, Prasse & Mahaffey
Publisher	Iowa State University Press,Ames
Year	1994 , 2010
Edition	Any edition
Book Website	-----
References	Kaneko. Clinical Biochemistry of Domestic Animals. Any edition is Ok

Assessment Policy		
Assessment Type	Expected Due Date	Weight
First Exam	~6 th week	30%
Second Exam	~11 th week	30%
Final Exam	Announced by registration office	40%
Assignments /participation	-----	Extra points

Course Objectives	Weights
1. Choose appropriate tests for dogs, cats, horses and ruminant to evaluate the hepatobiliary system, urinary system, digestive system, water-electrolytes & acid base status, muscle and endocrine organs.	20%
2. Identify and interpret significant abnormal values by localizing alterations to the correct organ (s)/ tissue(s) and describing pathologic mechanism leading to such biochemistry changes.	30%
3.Suggest appropriate disease differentials for any identified abnormalities and make recommendations for subsequent testing	20%
<p>4.From Photo micrographic, macroscopic evaluation of cytologic preparations, or written description – Be able to Correctly:</p> <p>Identify Specific Inflammatory cells & differentiate between epithelial and mesenchymal cell populations, as obtained from normal animals.</p> <p>Categorize inflammatory processes based on the types and morphology of cells involved, explain the pathophysiologic mechanisms for the process, suggest etiologies that are typically associated with such changes, identify the presence of bacterial organism and distinguished between the 4 major systemic fungal organisms.</p> <p>Identify and distinguished between round or discrete cell neoplasm.</p> <p>Identify cytomorphologic criteria of malignancy</p>	30%

Teaching & Learning Methods
Lectures, home works, assignments and practical sessions.

Resources
Internet http://eclinpath.com/ eClinPath, an online textbook on Veterinary Clinical Pathology

Course Content (Theory)		
Week	Topics	Chapter in Text (handouts)
1	Introduction	
2	Cytology 1 inflammation	http://eclinpath.com/
3	Cytology 2 neoplasia	http://eclinpath.com/
4	Cytology 3 body fluids	http://eclinpath.com/
5	Cytology 4 & 5 lymphoid tissue	http://eclinpath.com/
6	Urinary system I	9
7	Urinary system II	9
8	Electrolytes/acid-base	5
9	Acid-base II	5
10	Hepatobiliary system I & II	7
11	Hepatobiliary system III	7
12	Pancreas I & Pancreas II	11
13	Muscle & Protein	10 & 6
14	Endocrine System I & II	11
15	Review	
16	Final exam	

Course Content (practical)		
Week	Topics	Chapter in Text (handouts)
1	Introduction to veterinary cytology	
2	How to approach a cytological specimen	
3	Cytology of inflammatory process Cytology of infectious agents	
4	Cytology of discrete round cell tumor	
5	cytomorphologic criteria of malignancy Cytology of mesenchymal tissue Cytology of epithelial tissue	
6	Cytology of body fluids & Cytology of lymph node	
7	Discussion of clinical chemistry case #1	
8	Discussion of clinical chemistry case #2	
9	Discussion of clinical chemistry case #3	
10	Discussion of clinical chemistry case #4	
11	Discussion of clinical chemistry case #5	
12	Discussion of clinical chemistry case #6	
13	Discussion of clinical chemistry case #7	
14	Discussion of clinical chemistry case #8	
15	Review	
16	Final exam	