

Jordan University of Science and Technology
Faculty of Veterinary Medicine
Department of Pathology and Animal Health
First Semester 2006/2007
Course Syllabus

Course Information	
Course Title	Veterinary Pathology
Course Code	VM 451
Prerequisites	VM 352
Course Website	
Instructor	Prof. Nabil Hailat
Office Location	G1L2
Office Phone #	22026
Office Hours	10-11,(S,T,TH)
E-mail	hailatn@just.edu.jo
Teaching Assistant(s)	Graduate students
Course Description	
This course is a continuation of the Vet. Pathology which was taught in the winter semester of the previous academic year and is designed so that as a veterinary student you will capture and understand the mechanisms of pathological alterations that occur in an organ / system. The course will address the different diseases of the different systems.	

Textbook	
Title	Veterinary Pathology by Jones and Hunt
Author(s)	Thomas C. Jones , Ronald D. Hunt , Norval W. King
Publisher	Blackwell Publishing
Year	1997
Edition	Sixth
Book Website	
Other references	Mechanism of Disease/ A textbook of comparative General Pathology

Assessment		
Assessment	Expected Due Date	Percentage
First Exam	First sixth week	15
Second Exam	First 12 th week	15
Final Exam	After 15-16 weeks	30
Assignments	Laboratory	30
Participation		10
Attendance		

Course Objectives	Percentage
1. Train the students to recognize changes of tissues as the results of an injury at the system level	20%

2. to relate lesions to the mechanism of diseases	20%
3. to learn how to reach morphological diagnosis of different systems of several animal species.	20%
4. to learn how to study glass slides to reach a diagnosis.	30%
5. to learn how to collect information and relate that to disease diagnosis	10%
6.	

Teaching & Learning Methods
Lectures, seminars, videos, glass slides

Learning Outcomes: Upon successful completion of this course, students will be able to		
Related Objective(s)		Reference(s)
1. the student will be able to recognize lesions and diseases and reach diagnosis of the GIT system		Chapter 23
2 the student will be able to recognize lesions and diseases and reach diagnosis of the Respiratory system		Chapter 20
3 the student will be able to recognize lesions and diseases and reach diagnosis of the Cardiovascular system		Chapter 21
4 the student will be able to recognize lesions and diseases and reach diagnosis of the Renal system		Chapter 24
5 the student will be able to recognize lesions and diseases and reach diagnosis of the Reproductive system		Chapter 25
6 the student will be able to recognize lesions and diseases and reach diagnosis of the Hematopoietic and Lymphatic systems		Chapter 22

Useful Resources

Course Content		
Week	Topics	Chapter in Textbook (handouts)
1	Digestive System Pathology of the upper digestive tract. (2-3h) - a- congenital anomalies. - b- Cheilitis, stomatitis. - c- Pharynx & oesophagus. - d- Forestomachs: - Ruminal tympany - foreign body	Chapter 23

	- rumintis. - LSDA - abomasal dilation, displacement and volvulus. - Gastritis. - Gastric ulceration - Gastric neoplasms	
2	Pathology of the lower digestive tract. (2-3h) - a- neonatal diarrhea (mechanisms) : - E.coli. - Transmissible gastroenteritis. - Calf corona virus. - Rota virus - Cryptosporidiosis. - Coccidiosis - Clostridial diarrhea - b- Diseases of animal beyond the neonatal period ; - Edema disease - Salmonellosis. - Swine dysentery. - Campylobacter enterocolitis - enterotoxaemia - paratuberculosis - Equine granulomatous enteritis - Colitis X - Coccidiosis - Toxins - Parasites - c- Intestinal obstruction - Mechanical - Intestinal displacement	Chapter 23
3	Liver (2h) a. Structure and function b. Reaction to injury c. Fatty degeneration d. Hepatocellular necrosis e. Circulatory disturbances f. Hepatitis g. Metabolic liver disease h. Toxic liver disease i. Parasitic disease j. Cirrhosis	Chapter 23
3	Gastritis and enteritis in dog and cat (1h) a. Feline panleukopenia b. Canine parvovirus enteritis c. Canine coronavirus enteritis d. Canine distemper e. Canine hepatitis f. Colibacillosis g. Toxoplasmosis h. Histoplasmosis & histiocytic colitis i. Ulcerative colitis j. G.I. Neoplasms 5. Pancreatitis (1-2) a. CUTE b. Chronic c. Atrophic d. Neoplasms	Chapter 23
	Respiratory system 1. Normal structure 2. Nasal cavity and sinuses	Chapter 20

	a. Developmental anomalies b. haemorrhages c. Inflammation d. Neoplasms 3. Guttural pouches a. haemorrhages b. Inflammation 4. Larynx and Trachea a. Developmental anomalies b. Inflammation 5. Bronchi and Bronchioles a. Inflammation b. Bronchiectasis 6. Lungs a. Developmental anomalies b. Basic lung reactions c. Pneumoconiosis d. Pneumonia 1. stages 2. types e. Neoplasms of the lung 7. Pleura and ; leural cavity a. Abnormal content b. Pleuritis c. Mesothelioma	
	Cardiovascular system I Structure & function of CVS II Cardiac Failure (1h) III Myocardium (2h) A. Noninflammatory conditions 1. Degeneration & necrosis - Fatty chnge, - calcification, hyaline - degeneration, hydropic - Degeneration, atrophy, infarction 2. Hypertrophy & dilation. B. Inflammation of the myocardium 1. Suppurative myocarditis 2. Nonsuppurative 3. Neoplasms of the heart. Pericardium A. Pericarditis C. Pericardial sac fluid (non-inflammatory) hydro, hemo, pyo. Endocardium A. Noninflammatory conditions 1. endocardiosis (valiant fibrosis) 2. Calcification of the endocardium B. Inflammatory conditions 1. hemorrhages 2. endocarditis 3. miscellaneous lesions of the endocardium IV Arteries A. Physical (1h) INJURIES –	Chapter 21

	RUPTURE. b. Disturbances of circulation thrombosis, embolism aneurysm arteriosclerosis) c. Arterities V. Veins A. Physical injuries b. phlebitis c. Thrombosis d. Dilation of veins (varicose veins) e. Telangiectasis Lymphatics a. Inflammation b. Dilation and rupture of lymphatics VI. Neoplasms of blood vessels a. Hamangioma b. Hemangiosarcoma c. Hemangiopericytoma	
	Reproductive system Male Genital system 1. Testis and epididymis a. Developmental anomalies - Cryptorchidism - Ectopia testis - Testicular hypoplasia b. Hydrocele c. Testicular degeneration d. Orchitis and epididymitis e. Neoplasma 2. Prostate gland a. Hypoplasia b. Atrophy c. Hypertrophy / hyperplasia d. Squamous metaplasia e. Prodisplasia f. Neoplasms 3. Penis and prepuce a. Developmental anomalies b. Balanitis c. Miscellaneous d. Neoplasms 4. Intersex a. Hermaphroditism b. Pseudo –hermaphroditism c. Freemartinism Female Genital system : 1. Ovary a. Developmental anomalies b. Oophoritis c. Deranged development of ovarian follicles c. Neoplasms 2. Oviduct a. Developmental anomalies b. Salpingitis 3. Uterus a. Developmental anomalies b. Malposition c. Endometrial hypoplasia d. Inflammation 4. Cervix a. Inflammation	Chapter 25

	5. Vagina and Vulva a. Cysts b. Trauma c. Inflammation d. Congestion and edema e. Neoplasms 6. Mammary gland a. Developmental anomalies b. Mastitis c. Neoplasms	
	Renal system 1. renal structue and function / anatomy (1h) 2. Glomeruloeephritis a. Acute proliferative b. Membranous c. Memberanoproliferative d. Chronic glomerulonephritis e. Immune complx 3. Intersitial nephrities a. Acute interstitial nephiritis - Toxic tubular - Hypoxic - Immunologic - Infectious intersitial nephritis b. Chronic interstitial nephritis c. Pyelonephritis 4. Urinary obstruction and hydronephrosis (1h) 5. Urinary neoplasms 6. Ureters, urachus, baldder and urcthra (Inflammation)	Chapter 24
	- Pathology of Hematopoietic system 1. Structure and funtion 2. Thymus a. Developmental changes of the thymus b. Inflammatory disease c. Neoplastic desease 3. Lymph node a. General reaction in the lymph nodes b. Developmental changes c. Inflammatory diseases d. Hyperplasa and neoplasia (lymphoma) 4. Spleen a. Developmental changes b. Degenerative disease c. Rupture d. Torsion e. Cysts f. Circularory g. Inflammatory condutions h. Hyperplasia 5. Hemostatic funtion a. platelet funtion - Developlment - Anatomy - Physiology - Bleeding time 6. Hemostatic Dysfunction	Chapter 22

	Thrombocytopenia, secretion defects, aggregation defects, adhesion defects.	
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Additional Notes
The course is taught by two instructors, Nabil Hailat, DVM, Ph.D and Dr. Wael Hananeh .We welcome any positive or negative criticism and wish you good luck.