

UNIVERSITY OF GONDAR
COLLAGE OF VETERINARY MEDICINE AND ANIMAL SCIENCES
DEPARTMENT OF PARACLINICAL STUDIES
COURSE OUTLINE

Department	Para clinical studies
Program	Doctor of Veterinary Medicine (DVM)
Module Title	Veterinary Pathology
Module Coordinator	Dr. Grime Birhan
Course Title	Veterinary Systemic Pathology
Course Code	Vetm3112
Instructor's Name and Contact Information	Name: Dr. Girma Birhan Office: CVMAS building office #46 Phone: 0970922014 Email: girma.birhan@uog.edu.et , girmanana@gmail.com , Office hrs: Monday 2:00 PM-4:00 AM and Friday 2:00 PM-4:00 AM
	Name: Dr. Muluken Yayeh Office: CVMAS building office #36 Phone: 0913629555 Email: muluken.yayeh@uog.edu.et , yayehmulu@gmail.com Office hrs: Monday 2:00 PM-4:00 AM and Friday 2:00 PM-4:00
Course Information	Year: II and III Semester: II Meeting day: _____ Meeting time: 2:00 -4:00 PM Meeting location: CVMAS class room (DVM II) Veterinary pathology laboratory Room and Postmortem hall.
Course Credit	7ECTS/4CrHr
Course Description	Lectures: Studies pathology of cardiovascular system, pathologies of digestive system, urinary system, reproductive system, nervous system, endocrine glands, musculoskeletal system ,the integument and sense organs. Practicals (3 hours/week): includes activities like identification and interpretation of gross and microscopic features of common abnormalities in different organ systems, tissues and cells, collecting and dispatching of pathological samples, necropsy procedures etc.
Course Objectives	<ul style="list-style-type: none"> ▪ Know gross and microscopic appearances of lesions caused by various disease conditions ▪ Able to correlate gross and microscopic pathological changes with specific diseases for accurate diagnosis. ▪ Predict the application of the learned material in the control of animal diseases
Prerequisite	Veterinary Gross Anatomy II, Veterinary Histology II, Veterinary Embryology, Veterinary Physiology II
Mode of Delivery	Semester based/Parallel
Status of The Course	Core
Expectation	Students will be expected to attend every class session and to actively participate by asking questions when appropriate and by contributing to class and small group discussions. They will be expected to work hard individually to meet the requirement of the course, strictly follow safety rules and instructions in the laboratory
Learning Teaching Methods	<ul style="list-style-type: none"> • Lecture and other direct instruction: provide an overview on the major topics of the respective chapters, creating a topic for further reading and reason out.

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	<ul style="list-style-type: none"> • Interactive instruction: Group discussion and debate, group seminar, report writing, PowerPoint presentation of pictures from archive, description of displayed pictures from theoretical perspective. • Experiential Learning: Pre-lab talk, demonstration, Necropsy examination, Field observation, tissue processing for histopathology, tissue embedding and embalming, induction of some pathological changes on live animals (if possible). <p>Independent Learning: reading assignment, home study, report writing</p>
Assessment Methods	<p>Student assessment will be based on:</p> <p>Continuous assessment: 50%</p> <ul style="list-style-type: none"> • Tests • Quizzes • Presentation and discussion • Laboratory reports and examination <p>Final examinations: 50%</p>
Policy	<p>As per the guidelines of the University's senate legislation</p>

Lecture Schedule

Weeks	Teaching Methodology			Reading/References	Assessment	Instructor
	Topics	Lecture	Practical			
Week 1	Chapter1:Cardiovascular system <ul style="list-style-type: none"> • General consideration • Heart failure • Pericardial diseases 	Lecture Discussion Reading assignment	Microscopic Interpretation in systemic Veterinary Pathology	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Questioning and answering	Dr. Girma
	<ul style="list-style-type: none"> • Myocardial diseases • Endocardial diseases 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Questioning and answering	
Week 2	<ul style="list-style-type: none"> • Arterial diseases • Venous diseases 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of cardiovascular system PowerPoint presentation of pictures from archive	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Questioning and answering, Quiz and Assignments	Dr. Girma
	<ul style="list-style-type: none"> • Lymatic diseases • Specific diseases affecting the heart and vessels 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Questioning and answering	
Week 3	Chapter 2: Respiratory system <ul style="list-style-type: none"> • General considerations • Nasal cavity and sinuses 	Lecture Discussion Reading assignment	Slide Show ,Processing of tissues for histopathology	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Questioning and answering, self evaluation,	Dr. Girma

	<ul style="list-style-type: none"> • Pharynx and guttural pouches • Larynx and trachea 	Lecture Discussion Reading assignment	Slide Show , Processing of tissues for histopathology	1. Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Quiz, self evaluation	Dr. Girma
Week 4	<ul style="list-style-type: none"> • Bronchi and bronchioles • Lungs 	Lecture Discussion Reading assignment	Orientation to post mortem hall and carryout postmortem on poultry	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Peer assessing	Dr. Girma
	<ul style="list-style-type: none"> • Special forms of pneumonia • Specific infectious pneumonia 	Lecture Discussion Reading assignment	Microscopic and Slide Show	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Storytelling and peer evaluation	
Week 5	Chapter3:Alimentary system <ul style="list-style-type: none"> • Oral cavity • Esophagus 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of the respiratory system PowerPoint presentation of pictures from archive	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	self assessment	Dr. Girma
	<ul style="list-style-type: none"> • Fore stomach of ruminants • Stomach and abomasums 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier,	Quiz	
Week 6	<ul style="list-style-type: none"> • Small intestines • Large intestine 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Peer assessing	Dr. Girma

	<ul style="list-style-type: none"> Brief on infectious and parasitic diseases of the gastrointestinal tracts 	Lecture Discussion Reading assignment	Slide Show	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Answer and questioning	
Week 7	Chapter4:Liver and biliary system <ul style="list-style-type: none"> General consideration Hepatic dysfunction and failure Incidental findings 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of the alimentary system PowerPoint presentation of pictures from archive	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Answer and questioning	Dr. Girma
	<ul style="list-style-type: none"> Hepatocellular degeneration and necrosis Response of the liver to injury 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Answer and questioning	
Week 8	<ul style="list-style-type: none"> End stage liver or cirrhosis Toxic liver diseases Gallbladder and bile ducts 	Lecture Discussion Reading assignment	Slide Show, examination of gross lesions collected from abattoir	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Quiz, self assessing	Dr. Girma
	<ul style="list-style-type: none"> Metabolic disturbances Infectious and parasitic hepatitis 					
Week 9	Chapter 5: Urinary System <ul style="list-style-type: none"> General consideration Examinations of the kidney 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of the alimentary system Identification and interpretation of gross and microscopic features of common abnormalities of the hepatobiliary system	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Peer assessment	Dr. Girma
	<ul style="list-style-type: none"> Developmental anomalies Renal failure Growth, Metabolic and circulatory disturbances 					

			PowerPoint presentation of pictures from archive			
Week 10	<ul style="list-style-type: none"> Diseases of the glomeruli Diseases of the tubules 	Lecture Discussion Reading assignment		Mc Gavin, M.D. and Zachary, J.F., (2007).	Answer and questioning, self assessing	Dr. Girma
	<ul style="list-style-type: none"> Tubulo-interstitial diseases Diseases of the lower urinary tract 	Lecture Discussion Reading assignment	Slide Show, examination of gross lesions collected from abattoir	Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Answer and questioning, self assessing	
Week 11	Chapter 6: Female reproductive system <ul style="list-style-type: none"> Anomalies of development Ovary, Fallopian tube and Uterus Diseases of the pregnant uterus Cervix, Vagina and vulva Mammary gland 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of the hepatobiliary system PowerPoint presentation of pictures from archive	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Answer and questioning, self assessing	Dr. Muluken
					Answer and questioning, self assessing	
Week 12	Chapter 7: Pathology of the male reproductive system	Lecture Discussion Reading assignment	Slide Show	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Peer assessment Answer and questioning, self assessing	Dr. Muluken
Week 13	Chapter 8: Nervous system <ul style="list-style-type: none"> General consideration Response of neurons and neuroglia to injury Anomalies and malformations 	Lecture Discussion Reading assignment	Identification and interpretation of gross and microscopic features of common abnormalities of the urinary system Identification and	Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.	Quiz/test	Dr. Muluken

	<ul style="list-style-type: none"> Physical disturbances Circulatory disturbances Chemical toxicities Nutritional deficiencies, Infectious diseases, Parasitic infestations 	<p>Lecture</p> <p>Discussion</p> <p>Reading assignment</p>	<p>interpretation of gross and microscopic features of common abnormalities of <i>female and male reproductive system</i></p>	<p>Louis.</p>	<p>Answer and questioning</p>	
<p>Week 14</p>	<p>Chapter 9: Skeletal system</p> <ul style="list-style-type: none"> General considerations Reactions of the bone to injury Abnormalities of growth and development 	<p>Lecture</p> <p>Discussion</p> <p>Reading assignment</p>	<p>Identification and interpretation of gross and microscopic features of common abnormalities of <i>the nervous system</i></p> <p>PowerPoint presentation of pictures from archive</p>	<p>Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.</p>	<p>Answer and questioning</p>	<p>Dr. Muluken</p>
	<ul style="list-style-type: none"> Metabolic bone diseases Osteodystrophies 	<p>Lecture</p> <p>Discussion</p> <p>Reading assignment</p>	<p>Identification and interpretation of gross and microscopic features of common abnormalities of <i>the musculo-skeletal system</i></p> <p>PowerPoint presentation of pictures from archive</p>		<p>Answer and questioning</p>	
<p>Week 15</p>	<ul style="list-style-type: none"> Necrosis and inflammation of bones Diseases of joints 	<p>Lecture</p> <p>Discussion</p> <p>Reading assignment</p>	<p>PowerPoint presentation of pictures from archive</p>	<p>1. Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.</p> <p>2. Vane et al. (2007) Color Atlas of veterinary pathology, Saunders Elsevier.</p>	<p>Quiz/test</p>	<p>Dr. Muluken</p>
<p>Week 16</p>	<p>Chapter 10: Muscular system</p> <ul style="list-style-type: none"> Response of muscle to injury Degeneration and necrosis Congenital diseases of muscle 	<p>Lecture</p> <p>Discussion</p> <p>Reading assignment</p>	<p>Revisions of slide show, examination of gross lesions collected from abattoir</p>	<p>Mc Gavin, M.D. and Zachary, J.F., (2007). Pathologic basis of Veterinary Diseases, 4th ed. Elsevier, St. Louis.</p> <p>Vane et al. (2007) Color Atlas of</p>		<p>Dr. Muluken</p>

	<ul style="list-style-type: none"> • Disturbance and adaptation of growth • Inflammation of muscle • Nutritional myopathy • Exertional myopathies 	<p>Lecture Discussion Reading assignment</p>		<p>veterinary pathology, Saunders Elsevier.</p>		
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