

Specification for Large Ruminant Medicine course 2025/2026

1-Basic information

1.	Course title	Internal medicine (Large Ruminant Medicine)						
2.	Course code	511 (B) IV						
3.	Department offering the course	Animal Medicine						
4.	Number of hours	Theoretical	2	Practical	3	Other	0	Total 5
5.	Course Type	√ Obligatory Elective						
6.	Level	5 th year						
7.	Semester	Second semester						
8.	Academic program	Bachelor Veterinary medicine (BVM)						
9.	Faculty	Faculty of Veterinary medicine						
10.	University	Benha University						
11.	Name of course coordinator	Prof. Dr. Mohamed Ghanem						
12.	Course Specification Approval Date	Faculty council/ 27-8-2025						
13.	Course Specification Approval (Attach the decision/minutes of the department /committee/council)	Department council/						

2-Course overview

- **Course contents written in the program bylaw:**
General medicine small ruminant and camel , diseases of digestive system, cardiovascular system, respiratory diseases, urinary system, skin of large ruminant. metabolic diseases of sheep and goat and nutritional deficiency disease of large ruminant.
Clinical examination of digestive system, respiratory, cardiovascular, urinary, nervous system and skin of large ruminant , laboratory examination of feces and ruminal juice.

3- Intended learning outcomes of the course (ILOs):

	NARS ILOS		Course ILOS	
	Code	Text	Code	Text
Knowledge and understanding	2.5.	Principle of welfare, production and health maintenance of food	a1	Describe the function and anatomy of different organs of Large ruminants.

		producing and pet animals, sporting animals, wildlife , poultry and fish		
	2.6.	Basics of nutrition and feeding practices of healthy and diseased animals.	a2	Define different diseases affecting Large ruminants.
			a3	Nominate the system affected then the organ within the system.
	2.10	Toxicology and forensic medicine, animal medicine, theriogenology and veterinary surgery	a4	Identify the cause-disease interaction through the pathogenesis
	2.11	The most appropriate diagnosis and differential diagnosis of animals, poultry and fish diseases	a5	Conduct differential diagnosis between related diseases
			a6	Designate the general state disorders Large ruminants.
			a7	List a treatment schedule for each disease with regard to type of drug, effective dose and time of dosing.
			a8	Describe a protocol for prevention and control of Large ruminants diseases
Intellectual skills	4.3	Inculcate a rigorous approach to problem identification and solving.	b1	Plan a differential diagnosis based on clinical signs.
			b2	Determine inter-relation between system affections.
	4.4.	Proficiently secure diagnostic reasoning, develop problem lists and differential diagnosis in order to deductively and critically reach the most appropriate solution (s) and management of the addressed clinical problems.	b3	Determine the type other diagnostic aids used in diagnosis.
			b4	Decide on the appropriate treatment for each disease
	4.5.	Remain committed to life – long learning and updating / upgrading their biochemical sense and clinical skills.	b5	Read and comment the diagnostic tools and reports
			b6	Judge on giving a decision for either medical or surgical intervention

Practical skills	3.2.	Safely, correctly and humanely restrain animals for examination.	c2	Conduct clinical and physical examinations of diseases of Large ruminants.
	3.3	Obtain the history of the case whether it is of an individual animal or a group of animals	c1	Take a case history from owner of Large ruminants patient professionally.
	3.5	Appropriately select and interpret findings of the common clinical and laboratory diagnostic procedures to reach and adopt the most convenient therapeutic and manage mental approach	c3	Collect samples for lab diagnosis.
	3.7.	Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency	c4	Treat diseases by drug injection by various routes of administration.
	3.9	Conduct evidence-based problem-solving of field-presented problems tasks		
	3.10.	Provide emergency care to all species of animals.		
	3.11.	Utilize appropriate safety procedures to protect clients and co-workers.		
Transferable skills	5.1	Work under pressure and / or contradictory conditions	d1	Work under pressure during lab session.
	5.2	Function in a multidisciplinary team	d2	Work in a team during the diagnosis process.
	5.3	Communicate appropriately verbally and nonverbally	d3	Communicate & Cooperate with other colleagues for reaching diagnosis.
	5.5	Search for new information and technology as well as adopt life-long self-learning ethics	d4	Search for new information in the field of medicine.

4- Teaching and learning methods

Lectures	√	Discussion & seminar (self-learning)	√	Practical	√
Presentation & movies	√	Problem solving	√	Brain storming	√

Others	Field training - projects
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- Course contents:

Course contents:						
Number of the Week	Scientific content of the course (Course Topics)	Expected number of the Learning Hours				
		Total Weekly hours	Theoretical teaching (lectures/discussion groups/)	Training (Practical/ Clinical/)	Self-learning (Tasks/ Assignments/ Projects/ ...)	Other
W1	General Medicine of large ruminant	5	2	0		0
	General examination of large ruminant		0	3		0
W2	Diseases of Digestive system in large ruminant	5	2	0		0
	General examination of large ruminant		0	3		0
W3	Diseases of Digestive system in large ruminant	5	2	0	Formative quiz(self-learning)	0
	Clinical examination of Digestive system in large ruminant		0	3		0
W4	Diseases of respiratory system in large ruminant	5	2	0		0
	Clinical examination of respiratory system in large ruminant		0	3		0
W5	Diseases of respiratory system in large ruminant	5	2	0		0
	Clinical examination of respiratory system in large ruminant 1		0	3		0
W6	Metabolic diseases in large ruminant	5	2	0	Formative quiz(self-learning)	0
	Laboratory examination of urine, feces, and ruminal juice		0	3		0
W7	Semester works and Mid-term exam					
W8	Diseases of cardiovascular system in large ruminant	5	2	0		0

	Clinical examination of cardiovascular system in large ruminant		0	3		0
W9	Diseases of cardiovascular system in large ruminant	5	2	0		0
	Clinical examination of cardiovascular system in large ruminant		0	3		0
W10	Diseases of nervous system in large ruminant	5	2	0	Formative quiz(self-learning)	0
	Clinical examination of nervous system in large ruminant		0	3		0
W11	Disease of urinary system in large ruminant	5	2	0		0
	Clinical examination of urinary system in large ruminant		0	3		0
W12	Nutritional deficiency diseases in large ruminant	5	2	0		0
	Laboratory examination of urine, feces, and ruminal juice 2		0	3		0
W13	Diseases of skin in large ruminant	5	2	0	Formative quiz(self-learning)	0
	Clinical examination of skin in large ruminant		0	3		0
W14	Diseases of skin in large ruminant	5	2	0		0
	Clinical examination of skin in large ruminant		0	3		0
W15	Practical exam					

5- Assessment timing and grading:

a- Assessment methods (summative and formative)

1. **Formative assessment:** including (weekly quizzes, homework assignments and surveys).
2. **Summative assessment** including (quizzes, class activates, Mid-term exam, practical exam, oral exams and final written exams).

b- Assessment schedule and weight

Assessment method	Timing	Grade	Percent
Mid-term exam	7 th week	15	15%
Formative assessment	Throughout semester	-	-
Practical exam	15 th week	20	20%

oral exam	End of semester	15	15%
Written exam	End of semester	50	50%
Total		100	100

6- Learning resources and supportive facilities:

Learning resources	Main reference	Student handbook
	Essential books (text books)	<ul style="list-style-type: none"> • Peter D. Constable, Kenneth W Hinchcliff, Stanley H. Done and Walter Gruenberg (2017): Veterinary Medicine: A textbook of the diseases of cattle, horses, sheep, pigs and goats, 11th edn. (Constable, Veterinary Medicine) • Kristin Holtgrew-Bohling (2012) Large Animal Clinical Procedures for Veterinary Technicians. • Jody Rockett (2009) Veterinary Clinical Procedures. • Thomas J.Divers (2008) Diseases of Dairy Cattle
	Periodicals, Web sites, . . . etc	<ul style="list-style-type: none"> • Journal of Animal Science. • Research on Veterinary Science • Journal of American Veterinary Medical Association • American Journal of Veterinary Research • Tropical animal health and production • Preventive veterinary Medicine • Benha veterinary medical journal • http://www.ivis.org • http://www.merckvetmanual.com/mvm/index.jsp • www.drghanem.co.nr • www.ekb.eg
	Learning platform	Thinqi
supportive facilities	Devices & instruments	<u>Devices</u> Ultrasound machine ECG machine Centrifuge <u>Instruments</u> urinary catheters stomach tube mine detector Medical stethoscope Thermometer
		<ul style="list-style-type: none"> • Teaching hall (data show, white board). • Equipped laboratory of veterinary medical diagnosis (Medical stethoscope and thermometer- Ultrasonography- Electrocardiograph (ECG)). • Samples of veterinary drug.

		<ul style="list-style-type: none"> • Veterinary hospital • Educational farm for conducting the clinical examination of animals.
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Matrices:

A- Content and ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills
General Medicine of large ruminant	a4, a6	b1, b2,b3, b4	c1, c2 , c3, c4	d1, d2
Diseases of Digestive system in large ruminant	a1, a2, a3, a5, a7, a8	b1, b2,b3, b4	c1, c2 , c3, c4, c5	d1, d2, d3,d4
Diseases of respiratory system in large ruminant	a1, a2, a3, a5, a7, a8	b1, b2,b3, b4, b5	c1, c2 , c3, c4	d1, d2, d3
Metabolic diseases in large ruminant	a1, a2, a3	b1, b2,b3, b4	c1, c2 , c3	d1, d2, d3,d4
Diseases of cardiovascular system in large ruminant	a1, a2, a3, a5, a7, a8	b1, b2,b3, b4, b5	c1, c2 , c3, c4, c5	d1, d2, d3, d4
Diseases of nervous system in large ruminant	a1, a2, a3, a5	b1, b2,b3, b5	c1, c2 , c3, c4, c5	d1, d2, d3, d4
Disease of urinary system in large ruminant	a1, a2, a3, a5, a7, a8	b1, b2,b3, b5	c1, c2 , c3, c4, c5	d1, d2, d3
Nutritional deficiency diseases in large ruminant	a1, a2, a3	b1, b2,b3	c1, c2 , c3	d1, d3, d4
Diseases of skin in large ruminant	a1, a2, a3	b1, b2,b3, b4	c1, c2 , c3, c4	d1, d2, d3, d4
General examination of large ruminant	a1, a6	b1, b2,b3	c1, c2 , c3, c4	d1, d2, d3
Clinical examination of Digestive system in large ruminant	a1, a2, a3	b1, b2,b3, b5	c1, c2 , c3, c4	d1, d3, d4
Clinical examination of respiratory system in large ruminant	a1, a2, a3, a5	b1, b2,b3, b4, b5	c1, c2 , c3, c4	d1, d2, d3
Clinical examination of cardiovascular system in large ruminant	a1, a2, a3, a5	b1, b2,b3, b4	c1, c2 , c3, c4	d1, d2, d3, d4
Clinical examination of respiratory system in large ruminant	a1, a2, a3, a5	b1, b2,b3, b4	c1, c2 , c3, c4	d1, d2, d3

Clinical examination of nervous system in large ruminant	a1, a2, a3, a5	b1, b2, b4, b5	c1, c2 , c3, c4	d1, d2, d3, d4
Clinical examination of urinary system in large ruminant	a1, a2, a3, a5	b1, b2,b3, b5	c1, c2 , c3, c4	d1, d2, d3, d4
Clinical examination of skin in large ruminant	a1, a2, a3, a5	b1, b2,b3,	c1, c2 , c3, c4	d2, d3
Laboratory examination of urine, feces, and ruminal juice	a1, a2, a3, a5	b1, b2,b3	c1, c2 , c3, c4	d2, d3

B- Teaching and learning methods and ILOs matrix:

Course ILOs		Teaching and Learning methods						
		L	P&M	D&s	P(TPL)	Ps	Bs	FTP
Knowledge & understanding	a1	√	√	√			√	
	a2	√	√	√			√	
	a3	√	√	√			√	
	a4	√	√	√			√	
	a5	√	√	√			√	
	a6	√	√	√			√	
	a7	√	√	√			√	
	a8	√	√	√			√	
Intellectual skills	b1	√	√	√		√	√	√
	b2	√	√	√		√	√	√
	b3	√	√	√		√	√	√
	b4	√	√	√		√	√	√
	b5	√	√	√		√	√	√
	b6	√	√	√		√	√	√
Professional and practical skills	c1		√	√	√	√		√
	c2		√	√	√	√		√
	c3		√	√	√	√		√
	c4		√	√	√	√		√
	c5		√	√	√	√		√
General skills	d1	√		√		√		√
	d2	√		√	√			√
	d3			√	√			√
	d4		√	√				√

L: Lecture, **P&M:** Presentations & Movies, **D&S:** Discussions & Seminars (self-learning), **P(TPL):** Practical, **Ps:** Problem solving, **Bs:** Brain storming, **FTP:** field trip, Training, Project

C- Assessment methods and ILOs matrix:

Course ILOs		assessment method				
		Formative assessment	Mid-term exam	Oral	Practical	Written
Knowledge & understanding	a1	√	√	√		√
	a2	√	√	√		√
	a3	√	√	√		√
	a4	√	√	√		√
	a5	√	√	√		√
	a6	√	√	√		√
	a7	√	√	√		√
	a8	√	√	√		√
Intellectual skills	b1	√	√	√		√
	b2	√	√	√		√
	b3	√	√	√		√
	b4	√	√	√		√
	b5	√	√	√		√
	b6	√	√	√		√
Professional and practical skills	c1	√			√	
	c2	√			√	
	c3	√			√	
	c4	√			√	
	c5	√			√	
General skills	d1	√				
	d2	√				
	d3	√		√		
	d4	√				

Name and Signature
Course Coordinator

Prof. Dr. Mohamed Ghanem

Name and Signature
Program Coordinator

Prof. Dr. Mahmoud Abouelroos