Specification for Animal Medicine (Internal Medicine) course

2025/2026

1-Basic information

1.	**Course title**	General Medicine (A)							
2.	**Course code**	**MID.411**							
3.	**Department offering the course**	Animal Medicine (Internal Medicine)							
3.	**Level**	4th year							
4.	**Semester**	Fall							
5.	**Number of units/credit hours**	**Theoretical**	**1**	**Practical**	**1(3)**	**Other**	**0**	**Total**	**2(4)**
6.	**Course Type**	√ **Obligatory** **Elective**							
7.	**Academic program**	Bachelor of Veterinary Medicine (BVM)							
8.	**University**	Benha University							
9.	**Faculty**	Veterinary medicine							
10.	**Name of course coordinator**	Prof. Dr. Mohamed Ghanem							
11.	**Date of Approval**	Faculty council on 27/8/2025							
12.	**Date of Approval**	Department council on 8/7/2025							

2-Course overview

- **Course contents written in the program bylaw:**

Clinical examination for reaching diagnosis of general systemic states, principles of therapeutics/ clinical practice Field diagnostic tests, interpretation of the different tests in connection with clinical finding and treatment in diseased animals.

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

	NARS ILOS		**Course ILOS**	
	Code	**Text**	**Code**	**Text**
Knowledge and understanding	**2.6**	Basics of nutrition and feeding practices of healthy and diseased animals.	**a1**	Review the function and anatomy of different organs
	2.10	Toxicology and forensic medicine, animal medicine, theriogenology and veterinary surgery	**a2**	Define different diseases of systemic states
			a3	Nominate the system affected then the organ within the system.
			a4	Identify the cause-disease interaction through the pathogenesis of systemic state disturbances
			a6	Describe the general state disorders of different animals
			a7	List the drugs, effective dose and time of dosing for each disease.

			a8	Describe a protocol for prevention and control of systemic conditions diseases
	2.11	The most appropriate diagnosis and differential diagnosis of animals, poultry and fish diseases	**a5**	Describe the steps of diagnosis of systemic diseases
Intellectual skills	**4.3**	Inculcate a rigorous approach to problem identification and solving.	**b1**	Plan a differential diagnosis of diseases of general systemic state and specific diseases 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 of systemic states
			b4	Decide on the appropriate treatment for each systemic state disturbanc
	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
Professional and practical skills	**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 animal patient with systemic state disturbances.
	3.2	Safely, correctly and humanely restrain animals for examination.	**c2**	Conduct clinical and physical examinations of affected animal species
	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 of systemic disturbances
			c4	Manipulate the advanced diagnostic aids, such as sonar and endoscope as supplementary diagnostic tools
	3.7	Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency	**c2**	Conduct clinical and physical examinations of affected animal species
	3.9	Conduct evidence-based problem-solving of field–presented problems tasks	**c5**	Treat diseases by drug injection by various routes of administration.
	3.10	Provide emergency care to all species of animals		
	3.11	Utilize appropriate safety procedures to protect clients		

		and co-workers.		
General and 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**				

- Course contents:

Week [W]	**Topics**	**Weekly hours**	**Expected number of the Learning Hours**			
			Theoretical teaching (lectures/discussion groups/ .....)	Training (Practical/Clinical/ .....)	Self-learning (Tasks/ Assignments/ Projects/ ...)	Other (to be determined)
W1	Fever, Hypothermia, hyperthermia	**2(4)**	**1**	**1(3)**		**0**
W2	Septicemia, viremia	**2(4)**	**1**	**1(3)**		**0**
W3	Toxemia & endotoxemia	**2(4)**	**1**	**1(3)**		**0**
W4	Dehydration, Hypovolemia, hemorrhage	**2(4)**	**1**	**1(3)**	Formative quiz (Self-learning)	**0**
W5	Shock, types and their management	**2(4)**	**1**	**1(3)**		**0**
W6	Allergy & anaphylaxis	**2(4)**	**1**	**1(3)**		**0**
W7	**Semester works (one hour exam)**					
W8	Edema	**2(4)**	**1**	**1(3)**	Formative quiz (Self-learning)	**0**
W9	Disturbance of water Electrolyte imbalance &acid base imbalance	**2(4)**	**2**	**1(3)**		**0**

W10	Pain Clinical methods for detecting pain reflexes	**2(4)**	**1**	**1(3)**		**0**
W11	Stress Clinical examinations parameters in stressed animals	**2(4)**	**1**	**1(3)**	Formative quiz (Self-learning)	**0**
W12	Localized infection Examiations of animal for localized infection superficial and deep	**2(4)**	**1**	**1(3)**		**0**
W13	Disturbance in appetite, food intake & nutritional status Clinical and physical examination of the body condition score	**2(4)**	**1**	**1(3)**		**0**
W14	Wight loss or failure to gain wight Physical exercise and associated disorders Clinical examination of the general body condition and demeanor. Clinical and physical examination of systems involved in exercise intolerance	**2(4)**	**1**	**1(3)**	Formative quiz (Self-learning)	**0**
W15	**Practical exam**					

5- Assessment timing and grading:

a- Assessment methods (summative and formative)

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

b- Assessment schedule and weight

Assessment method	Assessment Timing (Week Number)	Marks/ Scores	Percent
Semester works including one hour exam	7^{th} week	10	10%
Assignments / Project /Portfolio/ Logbook	Throughout semester		
Field training			
Formative assessment	Throughout semester	-	-
Practical exam	15^{th} week	30	30%
oral exam	End of semester	10	10%
Written exam	End of semester	50	50%
Total		100	100%

6- Learning resources and supportive facilities:

Learning resources	**Main reference**	**Student handbook**: General Animal Medicine: summarized integrated course for 4th grade students Edit by Staff members
	Essential books (text books)	Constable, P.D., Hinchcliff, K.W., Done, S.H. and Grunberg, W. (2017) Veterinary Medicine. A Textbook of the Diseases of Cattle, Horse, Sheep, Pigs and Goats. 11th Edition, Saunders Elsevier, Missouri.Veterinary Medicine.
	Recommended books	Jody Rockett (2007) Veterinary Clinical Procedures.
	Periodicals, Web sites, . . . etc	• 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.ekb.eg
	Learning platform	Thinqi platform
Supportive facilities	**Devices & instruments**	**Devices** • Ultrasound machine • ECG machine • Centrifuge • digital balance **Instruments** • urinary catheters • stomach tube • mine detector • Medical stethoscope • Thermometer
		• Data show, white board. • Equipped laboratory of veterinary medical diagnosis • Samples of veterinary drugs. • Animal cases admitted to Veterinary hospital • Educational farm for conducting the clinical examination of animals

Matrices:

A- Content and ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills
Fever, Hypothermia, hyperthermia	a4, a6	b1, b2,b3, b4	c1, c2 , c3, c4	d1, d2,
Septicemia, viremia	a1, a2, a3, a5, a7, a8	b1, b2, b4, b5	c1, c2 , c3, c4, c5	d1, d2, d3,d4
Toxemia & endotoxemia	a1, a2, a3, a5, a7, a8	b1, b2,b3, b5	c1, c2 , c3, c4, c5	d1, d2, d3,d4
Dehydration, Hypovolemia, hemorrhage	a1, a2, a3, a5, a7, a8	b1, b2,b3,b5	c1, c2 , c3, c4, c5	d1, d2, d3,d4
Shock, types and their management	a1, a2, a3, a5, a7, a8	b1, b2,b3, b4, b5, b6	c1, c2 , c3, c4, c5	d1, d2, d3, d4
Allergy & anaphylaxis	a1, a2, a3, a5, a7, a8	b1, b2,b3, b4, b5	c1, c2 , c3, c4, c5	d1, d2, d3, d4
Edema	a1, a2, a3, a5, a7, a8	b1, b2,b3	c1, c2 , c3, c4, c5	d1, d2, d3, d4,
Disturbance of water	a1, a2, a3, a5, a7, a8	b1, b2,b3, b5	c1, c2 , c3, c4	d1, d2, d3, d4
Electrolyte imbalance &acid base imbalance	a1, a2, a3, a5, a7, a8	b1, b2,b3	c1, c2 , c3, c4	d1, d2, d3,d4
Pain	a1, a6	b1, b4, b5	c1, c2 , c3, c4	d1, d2, d3,d4
Stress	a1, a2, a3	b1, b2,b3, b4, b5	c1, c2 , c3, c4	d1, d2, d3,d4
Localized infection	a1, a2, a3, a5	b1, b4, b5	c1, c2 , c3, c4	d1, d2, d3,d4
Disturbance in appetite, food intake & nutritional status	a1, a2, a3, a5	b1, b4, b5, b6	c1, c2 , c3, c4	d1, d2, d3,d4
Wight loss or failure to gain wight	a1, a2, a3, a5	b1,b3, b4, b5	c1, c2 , c3, c4	d1, d2, d3,d4
Physical exercise and associated disorders	a1, a2, a3, a5	b1, b2, b4, b5	c1, c2 , c3, c4	d1, d2, d3,d4

B- Teaching and learning methods and ILOs matrix:

ILOs		Teaching and Learning methods						
		L	P&M	D&S	P(TPL)	Ps	Bs	FTP
Knowledge and 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:

ILOs		**Assessment method**				
		Formative assessment	**Semester works (one hour exam)**	**Oral**	**Practical**	**Written**
Knowledge and 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**