



Course specification

1-Basic information

Course Code:	S4-INMD
Course title :	Veterinary Internal Medicine
Academic year:	4th academic year
Program title:	B. Sc. Veterinary Medical sciences
Contact hours/ week	4 hours/week, (Lecture 2h/week, Practical 2h/week)
Approval Date	9/2017

2-Professional information

Overall aims of course:

As the internal veterinary medicine is a close block in the faculty of veterinary medicine, this course aims to enable the student to:

- 1-Recognize the normal healthy status vs. the abnormal pathological status (disease condition) in different animal species (farm animals and pets)
- 2-Identify the different abnormalities and clinical problems in different animal species (farm animals and pets).
- 3- Determine the cause (s), the pathophysiology, the data for diagnoses, and the differential diagnoses of similar disease conditions.

3- Intended learning outcomes of course (ILOs)

a-Knowledge and understanding:

By the end of this course the student should be able to:

- a1. Recall essential academic data that are essential for clinical studies.
- a2. Record the structure(s) and function(s) of healthy animals, which will allow students to recognize and understand abnormal, and disease states of body systems in different animal species.
- a3. Illustrate the general characterizations of diseases in each animal species.
- a4. Identify the cause(s), pathogenesis, clinical symptoms, investigations, treatment and prognosis of the most important internal medical diseases
- a5. Elicit the diagnosis steps and treatment of diseased cases.
- a6. Acquire the knowledge of the best practice in solving animal disease Problem.

b- Intellectual skills

By the end of this course the student should be able to:

- b1. Compare between healthy and diseased animal.
- b2. Differentiate between the possible diseases causing the similar clinical manifestations.
- b3. Integrate the diagnoses by using lab and different modalities of diagnosis.
- b4. Interpret the results of clinical examination, lab and different modalities of diagnoses
- b5. Extrapolate diagnosis, prognosis and treatment and management of the problem.
- b6. Deal with the drugs used in veterinary field and economical losses in the animal farming.



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c- Professional and practical skills

By the end of this course the student should be able to:

- c1. Apply the instruments and tools for clinical examination.
- c2. Perform the proper clinical examinations for animal examination.
- c3. Obtain the right clinical data and abnormalities (clinical signs and findings) from the investigated animals
- c4. Discover the incidence and clinical findings of the disease conditions.
- c5. Use drug therapy in veterinary field.

d- General and transferable skills

By the end of studying the course, the student should be able to:

- d1. Work in groups and manage time.
- d2. Demonstrate the clinical work under the field condition by medical campaigns.
- d3. Communicate effectively with public, colleagues and appropriate authorities.
- d4. Achieve computer skills necessary to formulate medical databases and use the internet for communication.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
4th year-1st semester General internal medicine (A) (Lec. 2 h./week, Pract. 2h./week)	1-General systemic states (Disturbances in body fluids, electrolytes and acid-base balance, disturbances in body temperature, toxemia, septicemia, viremia, shock, edema, pain, fluid therapy)	10	10	-
	2- Diseases of cardiovascular system. (Principles of circulatory failure , Manifestations of circulatory failure , Special examination of the cardiovascular system, Arrhythmias, Diseases of the heart, Diseases of the blood vessels)	16	8	8
	3-Diseases of urinary system (principles of urinary system diseases, principal manifestations of urinary tract disorders, nephritis, nephrosis, urethritis, cystitis, urolithiasis, urethritis, urinary bladder incontinence)	16	8	8

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	4-Introduction and terminology to veterinary clinical examination.	2	-	2
	5-The Methods of clinical examinations in Veterinary field. (inspection, palpation, percussion, auscultation, ballottement, tactile percussion, auscultation percussion technique, other modalities)	2	-	2
	6-Preliminary clinical examinations (Taking animal temperature, pulse, respiration, clinical examination of mucus membranes and lymph nodes)	6	-	6
Total		52	26	26

Course	Topic	No. of hours	Lectures	Practical
4th year-2nd semester Special internal medicine (A) (Lec. 2 h./week, Pract. 2h./week)	1- Diseases of respiratory system (principles of respiratory diseases, hypoxia, rhinitis, sinusitis, guttural pouch affection, laryngitis, tracheitis, bronchitis, pneumonia, pleurisy)	20	10	10
	2- Diseases of musculoskeletal system. (Principal manifestations of musculoskeletal disease, Diseases of muscles, Diseases of bones, Diseases of joints, Congenital defects of muscles, bones and joints)	10	8	2
	3- Introduction to Veterinary dermatology and diseases of skin and hair in different animal species. (Principles of treatment of diseases of the skin, Diseases of the epidermis and dermis, Granulomatous lesions of the skin, Congenital defects of the skin).	12	8	4
	4- Revision on clinical examination of farm animals	4	-	4
	5- Clinical examination card	6	-	6
Total		52	26	26



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5-Teaching and learning methods

5.1. Lectures (brain storming, discussion) in which one or more of the following facilities are used:

- 5.1.1. White board and data-show presentations.
- 5.1.2. Illustrations, charts, CD's, PowerPoint slides and recorded videos.
- 5.2- Self learning by preparing essays and presentations (computer researches).
- 5.3- Practical study (practical lessons in faculty farm, clinical cases from the faculty farm or from outside the faculty, ultrasonography, endoscopy, mouth gags, stomach tubes, catheters).
- 5.4-Training visits (Visits to animal farms, field trips....etc).

6-Teaching and learning methods for the students with disabilities

6.1. Not applicable.

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
written Exam	a4-a7	b1-b6	----	----
Practical Exam	a1,a2,a3	-----	c1-c5	-----
Oral Exam	a1-a7	b1- b6	-----	d1-d5

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	14 th week
Final exams	15 th -17 th week
Oral Exam	Managed by the department

7.3. Weight of assessments: per semester:

Assessment	Weight of assessment
Practical exams	30%
Final exams	50%
Oral exams	20%
Total	100%

8- List of references

8.1. Notes and books

-None.

8.2. Essential books:

- 1- Veterinary clinical diagnosis (1984): W. R. Kelly 1984, 3rd. Ed, Billiere Tindall, London.
- 2-Veterinary medicine: a textbook of the diseases of cattle sheep, pigs, goats and horses (2010): Radostits, O. M., Blood D. C., Gay, C. C., Arundal, J. H., 10th. Ed., Billiere Tindall,



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London.

3- Large Animal Internal Medicine (1998): Timothy, H. Oglivie, Williams & Wilkins.

4- Small Animal Internal Medicine (1997): Darcy, Show and Sherri Ihle, Williams & Wilkins.

5-Handouts .

**These books are available in the library of faculty of Veterinary Medicine, Beni-Suef University.*

8.3. Recommended texts

1- Veterinary clinical examination and diagnosis (2000): Radostits O. M. , 1st. Ed. Billiere Tindall, London

2 - Large animal internal medicine (1998): Bradford P. Smith, Mosby-Yearbook, Inc. USA.

**These books are found in the library of faculty of veterinary medicine, Beni-Suef University.*

8.4. Journals

- Journal of Veterinary Internal Medicine - Wiley Online Library

- JVIM - American College of Veterinary Internal Medicine

- Veterinary Medicine International — an Open Access Journal

- Journal of Equine Veterinary Science - Elsevier

- The Journal of Applied Research in Veterinary Medicine

- British Veterinary Journal - ScienceDirect.com

- Journal of Equine Veterinary Science

8.5. Websites

- www.ekb.eg/ar: Egyptian knowledge bank.

-www.Sciencedirect.com

- www.Pupmed.com

- www.google.com

- www.FAO

Course Coordinators

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Topics		Week	Intended learning outcomes of course (ILOs)			
			K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
First Semester						
1.	General systemic states (Disturbances in body fluids, electrolytes and acid-base balance, disturbances in body temperature, toxemia, septicemia, viremia, shock, edema, pain, fluid therapy)	Lectures:1-5	a1-a6	b1-b6	---	---
2.	Diseases of cardiovascular system. (Principles of circulatory failure , Manifestations of circulatory failure , Special examination of the cardiovascular system, Arrhythmias, Diseases of the heart, Diseases of the blood vessels)	Lectures: 6-9	a1- a6	b1-b6	----	----
		Practical:6-9			c1-c5	d1-d4
3.	Diseases of urinary system (principles of urinary system diseases, nephritis, hydronephrosis, urethritis, cystitis, urolithiasis, urethritis, urinary bladder incontinence)	Lectures: 10-13	a1- a6	b1-b6	----	----
		Practical: 10-13	----	---	c1-c6	d1-d4
4.	Introduction and terminology to veterinary clinical examination.	Practical: 1	---	----	c1-c4	d1-d4
5.	The Methods of clinical examinations in Veterinary field. (inspection, palpation, percussion, auscultation, ballottement, tactile percussion, auscultation percussion technique)	Practical: 2	---	----	c1-c4	d1-d4
6.	Preliminary clinical examination (Taking animal temperature, pulse, respiration, clinical examination of mucus membranes and lymph nodes) [last first week for revision, and the last week for practical exams]	Practical: 3-5	---	----	c1-c4	d1-d4

Second Semester						
1.	Diseases of respiratory system (principles of respiratory diseases, hypoxia, rhinitis, sinusitis, guttural pouch affection, laryngitis, tracheitis, bronchitis, pneumonia, pleurisy)	Lectures: 1-5	a1-a6	b1-b6	---	----
		Practical: 1-5			c1-c5	d1-d4
2.	Diseases of musculoskeletal system. (Principal manifestations of musculoskeletal disease, Diseases of muscles, Diseases of bones, Diseases of joints, Congenital defects of muscles, bones and joints)	Lectures: 6-8	a1-a6	b1-b6	----	--
3.	Introduction to Veterinary dermatology and diseases of skin and hair in different animal species. (Principles of treatment of diseases of the skin, Diseases of the epidermis and dermis , Granulomatous lesions of the skin, Congenital defects of the skin).	Lectures: 9-13	a1-a6	b1-b6	-----	-----
		Practical: 6-7	-----	----	c1-c5	d1-d4
4.	4- Revision on clinical examination of farm animals	Practical: 8-10	---	----	c1-c5	d1-d4
5.	5- Clinical examination card	Practical: 11-13	----	-----	c1-c5	d1-d4