Course specification

1-Basic information

Course Code:	**S5-INMD**
Course title :	**Veterinary Internal Medicine**
Academic year:	**5th academic year**
Program title:	**B. Sc. Veterinary Medical sciences**
Contact hours/ week	**4 hours/week, (Lecture 2h/week, Practical 2h/week)**
Approval Date	

2-Professional information

Overall aims of course:

This course aims to:

1-Identify clinical problems, as the internal medicine is the close stone in faculty of veterinary medicine.

2- Determine the cause (s), the pathophysiology, the data for diagnosis, and the differential diagnosis 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 for clinical studies.

a2. Outline the general characterization of diseases of each species.

a3. Define the structure and function of healthy animals, which will allow students to recognize and understand abnormal, and disease states of body systems.

a4. Elicit the diagnosis and treatment of diseased cases.

a5. Ascertain knowledge of the best practice in solving animal disease Problem.

a6. Determine the causes, pathogenesis, clinical symptoms, investigations, treatment and prognosis of the most important internal medical diseases.

a7. Brief information about biochemistry and chemistry reactions related to some cardiac and metabolic diseases.

b- Intellectual skills

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

b1. Differentiate between healthy and diseased animal.

b2. Differentiate between the possible diseases causing the similar clinical manifestations.

b3. Integrate the diagnosis by using lab and new modalities of diagnosis.

b4. Interpret the results of clinical examination, lab and different modalities of diagnosis

b5. Make a decision of diagnosis, prognosis and treatment and management of the problem.

b6. Use drugs in correct manner and deal with the 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. Prepare the instruments and tools for clinical examination.

c2. Perform the proper traditional clinical examination and design the clinical diagnosis cheat for animal clinical examination in individual and herd animal.

c3. Analyze the incidence and symptoms of diseases.

c4. Use different drugs and its route of administration.

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. Identify and diagnose the different diseases.

d4. Correctly use drugs and treatment.

d5. Prevent and control different diseases.

d6. Maintain a professional image concerning behavior, dress and speech.

d7. Be responsible toward work.

d8. Communicate effectively with public, colleagues and appropriate authorities.

d9. Achieve computer skills necessary to make use of medical databases and use the internet for communication.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
5th year-1st semester Special internal medicine (A) (Lec. 2 h./week, Pract. 2h./week)	**1- 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)	20	10	10
	2- Diseases of musculoskeletal system. (Principal manifestations of musculoskeletal disease, Diseases of muscles, Diseases of bones, Diseases o f joints, Congenital defects o f muscles, bones and joints)	10	6	4
	3- Diseases of metabolic disorders in farm animals. (Milk fever, ketosis, fatty liver, hypomagnesaemia, hypophosphataemia,	10	10	-

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	pregnancy toxemia, downer cow syndrome azoturia in equines)			
	4- Revision on clinical examination of farm animals	6	-	6
	5- Clinical examination card	6	-	6
Total		52	26	26

5th year-2nd semester Special internal medicine (B) (Lec. 2 h./week, Pract. 2h./week)	**1- Diseases of nutritional deficiencies.** (Deficiencies of energy and protein, Diseases associated with deficiencies of mineral nutrients , Disease associated with deficiencies of fat-soluble vitamins, Diseases associated with deficiency of water-soluble vitamins)	12	12	-
	2- 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).	8	8	-
	3- Introduction to Veterinary neurology and diseases of nervous system in animal species. (Principles of nervous dysfunction, Clinical manifestations of disease of the nervous system, Special examination of the nervous system, Principles of treatment of diseases of the nervous system, Pathophysiological mechanisms of nervous system disease, diseases of the brain, Diseases o f the spinal cord)	6	6	-
	4- Clinical examination card	20	-	18
	5- Clinical cases	6	-	8
Total		52	26	26

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.

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5.1.2. Illustrations, charts, CD's, PowerPoint slides and recorded videos.
5.2- Self learning by preparing essays and presentations (computer researches and faculty library)
5.3- Practical (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).

6-Teaching and learning methods for the students with disabilities

6.1. Students with difficulties are encouraged to contact department instructors in office hours to discuss their individual needs for learning accommodation that may affect their ability to participate in course activities or to meet the course requirements.
6.2. At the end of practical sessions, overall revision was done for all students to overcome the problem of non-attendance any practical session.

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**
Final Exam	a1-a2	b1-b4,c2	c1-c2	----
Practical Exam	a1-a2	c1,b1-b2,b4	c1-c2	d1-d3
Oral Exam	a1-a2	b1- b4	c1-c2	d1-d3

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	14th week
Final exams	Managed by the faculty
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%
	100%

8- List of references

8.1. Notes and books

-None.

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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, London.
3- Large Animal Internal Medicine (1998): Timthy, H. Oglivie, Williams & Wilkins.
4- Small Animal Internal Medicine (1997): Darcy, Show and Sherri Ihle, Williams & Wilkins

*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

Websites:

-www.Sciencedirect.com
- www.Pupmed.com
- www.google.com
- www.FAO

Course Coordinators
dr. Emad Abd El hamid Mohamed
Lecturer of Veterinary Internal Medicine
Faculty of Veterinary Medicine,
Beni-Suef University

Head of Department
prof dr. Hussein Ebrahem Hussein
Professor of Infectious diseases
Faculty of Veterinary Medicine,
Beni-Suef University

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.	**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)	1-5	a1, a3, a5, a6	b1,	-	d1-d9
2.	**Diseases of musculoskeletal system.** (Principal manifestations of musculoskeletal disease, Diseases of muscles, Diseases of bones, Diseases o f joints, Congenital defects o f muscles, bones and joints)	6-8	a1, a2, a3, a4, a5, a6	b1,b2,b3,b4	-	d1-d9
3.	**Diseases of metabolic disorders in farm animals.** (Milk fever, ketosis, fatty liver, hypomagnesaemia, hypophosphataemia, pregnancy toxemia, downer cow syndrome azoturia in equines)	9-13	a1, a2, a3, a4, a5, a6	b1, b3,b4	-	d1-d9
4.	**Revision on clinical examination of farm animals**	8,9,10	a1, a2, a3	b1, b3,b4	-	d1-d9
5.	**Clinical examination card**	11-13	a1, a2, a3	b2, b3,b4	c1, c2, c4	d1-d9

Second Semester						
1.	**Diseases of nutritional deficiencies.** (Deficiencies of energy and protein, Diseases associated with deficiencies of mineral nutrients , Disease associated with deficiencies of fat-soluble vitamins, Diseases associated with deficiency of water-soluble vitamins)	1-6	a1, a2, a3, a4	b1,b2,b3,b4, b5,b6	-	d1-d9
2.	**Introduction to Veterinary dermatology and diseases of**	7-10	a1, a2, a3, a4	b1,b2,b3,b4,	-	d1-d9

	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).			b5,b6		
3.	**Introduction to Veterinary neurology and diseases of nervous system in animal species.** (Principles of nervous dysfunction, Clinical manifestations of disease of the nervous system, Special examination of the nervous system, Principles of treatment of diseases of the nervous system, Pathophysiological mechanisms of nervous system disease, diseases of the brain, Diseases o f the spinal cord)	11-13	a1, a2, a3, a4	b1,b2,b3	-	d1-d9
4.	**Clinical examination card**	1-9	a1, a2, a3, a4	b1,b2,b3	-	d1-d9
5.	**Clinical cases**	10-13	a1, a2, a3, a4	b1,b2,b3	-	d1-d9