



Course Specification of Veterinary Internal Medicine (2)

I. Course Identification and General Information:						
1	Course Title:	Veterinary Internal Medicine (2)				
2	Course Number & Code:	IM465				
3	Credit hours:	C.H				Total
		Theoretical	Practical	Training	Seminar	
		3	1	-	-	4
4	Study level/ semester at which this course is offered:	Fourth Year - Second Semester				
5	Pre –requisite (if any):	IM464				
6	Co –requisite (if any):	None				
7	Program (s) in which the course is offered:	Bachelor of Veterinary Medicine				
8	Language of teaching the course:	English language				
9	Location of teaching the course:	Faculty of Veterinary Medicine Building				
10	Prepared by:	Dr. Abdulraqeb Ali Alshami				
11	Date of approval:					

II. Course description:

This course reviews internal diseases that effecting different body systems of animal species such as cattle, horses, sheep, goat and small animals. The etiology, clinical signs and pathogenesis of these diseases will be discussed in details as will as diagnosis, treatment and prevention. Students will learn concepts related to basic clinical examination, diagnostic principles and treatment for different animal species. Students will also be able to the development and application of appropriate professional attitudes, communication and problem solving skills.

Prepared by
Dr. Abdulraqeb Alshami

Quality Assurance Unit
Dr. Abdulraqeb Alshami

Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



III. Intended learning outcomes (ILOs) of the course:

(A) Knowledge and Understanding:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: **Knowledge and Understanding.**

Program Intended Learning Outcomes (Sub-PILOs) in: Knowledge and Understanding		Course Intended Learning Outcomes (CILOs) in: Knowledge and Understanding	
After completing this program, students will be able to:		After completing this course, students will be able to:	
A2-	Clarifies basic concepts, principles, and theories related to animal production, animal health and nutrition, behavior management, breeding and care that is related to animal ethical codes.	a1-	Describe appropriate management for abnormalities affecting growth and development.
A3-	Identifies various causes of animal diseases, animal epidemics and how they can be diagnosed; including common and life-threatening diseases of animals, poultry and fish.	a2-	Elucidate the causes, pathogenesis, clinical symptoms, diagnosis, treatment and prognosis of the diseases of liver and pancreas and urinary, cardiovascular, nervous and musculoskeletal system .

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Knowledge and Understanding		Teaching strategies/methods to be used	Methods of assessment
completing this course, students will be able to:		-Lectures using board, data shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty library) -Practical training (Clinical demonstrations, practice of	- Written exam - Practical exam - Oral exam - Quizzes - Report assignments - Discussion
a1-	Describe appropriate management for abnormalities affecting growth and development.		
a2-	Elucidate the causes, pathogenesis, clinical symptoms, diagnosis, treatment and prognosis of the diseases of liver and pancreas and urinary, cardiovascular, nervous and musculoskeletal system .		

Prepared by Quality Assurance Unit
Dr. Abdulraqeb Alshami Dr. Abdulraqeb Alshami

Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof Al-Shawkany

Academic Development Center & Quality Assurance
Ass. Prof. Dr. Huda Al-Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



		skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	
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(B) Intellectual Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Intellectual skills			
Program Intended Learning Outcomes (Sub-PILOs) in Intellectual skills		Course Intended Learning Outcomes (CILOs) of Intellectual Skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
B1-	Competently practices analytical and critical thinking skills in studying and assessing health problems and reading the results of animal medical examinations and in related sciences.	b1-	Interpret the incidence and most important symptoms and signs of disease in animals.
B4-	Determine appropriate and effective treatment evaluates all medications used for each diseased condition.	b2-	Recognize appropriate initial management for different animal emergencies.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Intellectual Skills to Teaching Methods and Assessment Methods:			
Course Intended Learning Outcomes (CILOs) in Intellectual Skills.		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:			
b1-	Interpret the incidence and most important symptoms and signs of disease in animals.	-Lectures using board, data shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty	-Written exam -Practical exam -Oral exam - Quizzes - Report assignments - Discussion
b2-	Recognize appropriate initial management for different animal emergencies.		

Prepared by
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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



		library) -Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	
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(C) Professional and Practical Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: **Professional and Practical Skills**

Program Intended Learning Outcomes (Sub-PILOs) in Professional and Practical Skills		Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
C3-	Reads the results of laboratory investigations and diagnostic scans and writes reports and prescriptions for all common cases in a proper way.	c1-	Perform an adequate clinical examination for diseased animal and identify deviations from normal.
C4-	Treats of animal patients safely and effectively taking into account the evaluation of the results, the appropriate modification of the treatment plan and the accurate description of the appropriate medications.	c2-	Formulate appropriate management plans for individual patients presenting with the most common internal medicine. The management plan should indicate investigations (and how they would be interpreted) as well as treatment.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills	Teaching strategies/methods to be used	Methods of assessment
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Prepared by
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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
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Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



After completing this course, students will be able to:		-Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic - Case study	-Written exam -Practical exam -Oral exam - Quizzes - Report assignments - Discussion
c1-	Perform an adequate clinical examination for diseased animal and identify deviations from normal.		
c2-	Formulate appropriate management plans for individual patients presenting with the most common internal medicine. The management plan should indicate investigations (and how they would be interpreted) as well as treatment.		

(D) General / Transferable Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: **General and Transferable skills**

Program Intended Learning Outcomes (PILOs) in General / Transferable skills		Course Intended Learning Outcomes (CILOs) in General / Transferable skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
D2-	Develops his scientific, professional and research capabilities and follow what is emerging in his field of specialization and using computer applications and information and communication technology.	d1-	Cooperate in work effectively and share learned knowledge.
D3-	Practices problem-solving, negotiation, supervision and veterinary medical management skills and writing research reports efficiently and professionally.	d2-	Use new technology in veterinary extension and capability of use of recent communications tools like E mail, fax and internet connections

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of General and Transferable skills to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in General and Transferable Skills	Teaching strategies/methods to be used	Methods of assessment
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Prepared by
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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



After completing this course, students will be able to:		-Self-learning by preparing essay and presentations (computer and faculty library) - Cooperative learning and working groups - Scientific visits - discussions - Assignments	- Achievement file - Evaluating student presentations. - Practical exam - Report assignments - Discussion - Note performance
d1-	Cooperate in work effectively and share learned knowledge.		
d2-	Use new technology in veterinary extension and capability of use of recent communications tools like E mail, fax and internet connections		

IV. Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect

Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Number of weeks	Contact hours
1	Diseases of liver and pancreas	a1, a2, b1, b2, c1, c2, d2	-Principles of hepatic disfunction -Manifestation of liver and biliary diseases -Principles of treatment in diseases of the liver -Diffuse diseases of the liver -Diseases of pancreas	2	6
2	Diseases of cardiovascular system	a1, a2, b1, b2, c1, c2, d2	- Principles of circulatory failure - Manifestation of circulatory failure -Arrhythmias -Diseases of the heart - Diseases of the blood vessels	2	6
3	Diseases of urinary system	a1, a2, b1, b2, c1,	- Principles of renal	2	6

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Emad

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		c2, d2	insufficiency - Principles of treatment of urinary tract disease - Diseases of the kidney - Diseases of the bladder, ureters and urethra		
4	Diseases of the hemolymphatic and immune systems	a1, a2, b1, b2, c1, c2, d2	-Hemorrhagic disease - lymphadenitis -Amyloidosis	1	3
5	Diseases of nervous system	a1, a2, b1, b2, c1, c2, d2	- Principles of nervous dysfunction - Principles of treatment of diseases of the nervous system - Diffuse diseases of the brain -Diseases of the meninges -Epilepsy -Diseases of the spinal cord	2	6
6	Diseases of musculoskeletal system	a1, a2, b1, b2, c1, c2, d2	-Diseases of muscles -Diseases of bones -Diseases of joints -Congenital defects of muscles, bones and joints	2	6
7	Diseases of skin	a1, a2, b1, b2, c1, c2, d2	- Principles of treatment of diseases of the skin -Diseases of the epidermis and dermis -Diseases of the hair, wool, follicles, skin glands, horns and hooves	2	6
8	Diseases of conjunctiva and external ear	a1, a2, b1, b2, c1, c2, d2	- Diseases of conjunctiva - Congenital defects of the eyelids and cornea - Diseases of external ear	1	3
Number of Weeks /and Units Per Semester				14	42

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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



b- Training Aspect:				
Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	Examination of liver and pancreas (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
2	Examination of cardiovascular system (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
3	Examination of urinary system (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
4	Examination of hemolymphatic and immune systems (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	1	2
5	Examination of nervous system (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
6	Examination of musculoskeletal system (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
7	Examination of skin (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	2	4
8	Examination of conjunctiva and external ear (cases, how to examine and treat)	a1, a2, b1, b2, c1, c2, d2	1	2
Number of Weeks /and Units Per Semester			14	28

V. Teaching strategies of the course:

- Lectures using board, data shows and multimedia aids.
- Self-learning by preparing essay and presentations (computer and faculty library)
- Brainstorm
- Discussion
- Cooperative learning

Prepared by
Dr. Abdulraqeb Alshami

Quality Assurance Unit
Dr. Abdulraqeb Alshami

Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



- Practical training (Clinical demonstrations, practice of skills, and discussions).
 - (a) Field visits (farms and villages)
 - (b) General experimental animal teaching
 - (c) Clinical and small group sessions
 - (d) Outpatient clinic
- Tutorial classes (small group teaching)

3-Assessment Methods:

- Written exam
- Practical exam
- Oral exam
- Quizzes
- Report assignments
- Discussion

Grading Scale:

Grades are awarded on a scale from A to F, where A is the best grade (90-100) and F is a fail(<50).

VI. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes (CILOs symbols)
1	Participation, quizzes and assignments	2-14	10	10%	a1, a2, b1, b2, c1, c2, d2
2	Mid-Term Exam	8	10	10%	a1, a2, b1, b2, c1, c2
3	Mid-Term Practical Exam	8	10	10%	a1, a2, b1, b2, c1, c2
4	Final Practical Exam	15	10	10%	a1, a2, b1, b2, c1, c2
5	Oral Exam	16	5	5%	a1, a2, b1, b2, c1, c2

Prepared by
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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

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Center & Quality
Assurance
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6	Final Exam	16	55	55%	a1, a2, b1, b2, c1, c2
Total		100	100%		

VII. Students' Support:	
Office Hours/week	Other Procedures (if any)
Saturday-Wednesday from 8:00 a.m.-2 p.m.	Student can contact me via email

VIII. Learning Resource (MLA style or APA style):S:	
1- Required Textbook(s) (maximum two)	
	<ul style="list-style-type: none"> • Radostitis O.M., Gay C.C., Hinchcliff K. W. and Constable P. D. (2007): Veterinary Medicine, A textbook of the diseases of cattle, horses, sheep, pigs and goats 10th Ed. Baillere Tindall, London. • Smith, B.P (2002): Large animal internal medicine, third ed., Mosby, St Louis, London, Philadelphia, Sydney, Toronto.
2- Recommended Readings and Reference Materials	
	<ul style="list-style-type: none"> • Radostitis O.M., Gay C.C., Hinchcliff K. W. and Constable P. D. (2007): Veterinary Medicine, A textbook of the diseases of cattle, horses, sheep, pigs and goats 10th Ed. Baillere Tindall, London. • Smith, B.P (2002): Large animal internal medicine, third ed., Mosby, St Louis, London, Philadelphia, Sydney, Toronto. • Color atlas of diseases and disorders in cattle by. Blowey, Roger W and Weaver, A. David 2011^{3rd} Ed • Pocket companion to textbook of veterinary internal medicine • Ettinger, Stephen J. • Philip R.S., Colin D.P. and Alastair I. M (2011): Cattle Medicine. Manson Publishing/The Veterinary Press. • Pugh D.G. (2002): Sheep and goat medicine . ¹st ed., Saunders An Imprint of Elsevier, Philadelphia, Pennsylvania.

Prepared by
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Quality Assurance Unit
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Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



3- Essential References	
	<ul style="list-style-type: none"> • Radostitis O.M., Gay C.C., Hinchcliff K. W. and Constable P. D. (2007): Veterinary Medicine, A textbook of the diseases of cattle, horses, sheep, pigs and goats 10th Ed. Baillere Tindall, London. • Smith, B.P (2002): Large animal internal medicine, third ed., Mosby, St Louis, London, Philadelphia Sydney, Toronto. • Textbook of veterinary internal medicine.
4- Electronic Materials and Web Sites etc.	
	<p>Journal of Veterinary Internal Medicine (http://www.wiley.com/bw/journal.asp)</p> <ul style="list-style-type: none"> • American College of Veterinary Internal Medicine • Internal Medicine www.criticalcarevets.com • Internal Medicine www.animal-emergency.com • Central Texas Veterinary Specialty Hospital - Internal Medicine • IVIS Bookstore: Ruminant Medicine - International Veterinary • Alberta Agriculture, Food and Rural Development <p>Livestock diseases and parasites.</p> <ul style="list-style-type: none"> • American Association of Bovine Practitioners <p>The American Association of Bovine Practitioners is an international association of veterinarians organized to enhance the professional lives of its members through relevant continuing education that will improve the well-being of cattle and the economic success of their owners, increase awareness and promote leadership for issues critical to cattle industries, and improve opportunities for careers in bovine medicine.</p> <ul style="list-style-type: none"> • American Association of Small Ruminant Practitioners • Animal Disease Information <p>Animal disease factsheets, image database, power points, zoonotic fast facts, disease wall charts, etc.</p> <ul style="list-style-type: none"> • Bovine Tuberculosis Eradication: Uniform Methods and Rules <p>(PDF) These Uniform Methods and Rules (UM&R) are the minimum standards adopted and approved by the Animal and Plant Health Inspection Service (APHIS). They were established for the maintenance of tuberculosis-free accredited herds of cattle and bison and the maintenance of State or zone status in the U.S. Department of Agriculture's (USDA) tuberculosis eradication program. These minimum standards do not preclude the adoption of more stringent standards by any State or zone.</p> <ul style="list-style-type: none"> • Cattle Diseases <p>University of Nebraska - NU Institute of Agriculture and Natural Resources</p> <ul style="list-style-type: none"> • Large Animal Veterinary Rounds

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Center & Quality
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Emad

Rector of Sana'a University
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	<p>Rounds transcripts presented at the Western College of Veterinary Medicine (University of Saskatchewan) Department of Large Animal Clinical Sciences. The transcripts are available in pdf format and are searchable by year.</p> <ul style="list-style-type: none"> • Food Animal Production Medicine Nutrition Topics <p>Publications, information, and data collection tools include: Herd Based Tests For Metabolic Disorders, Introduction To Ruminant Acidosis, Herd Based Diagnosis Of Ruminant Acidosis, Nutritional Management Of Ruminant Acidosis, Factors That Contribute To Ruminant Acidosis, Ketosis And Hepatic Lipidosis, Hypokalemia Article, Calcium Chloride Gel Treatment Of Parturient Dairy Cows, and a Herd Nutrition History And Evaluation Form.</p> <ul style="list-style-type: none"> • Small Ruminant Information <p>A variety of extension publications on sheep from the University of Missouri. Covering subjects from Care of Ewes and Lambs at Lambing Time to Mastitis in the Ewe.</p> <ul style="list-style-type: none"> • Equine Medicine • Pet Animals Medicine - News Results • Livestock Library
5- Other Learning Material:	

X. Course Policies:	
1	Class Attendance: MANDATORY TO ATTEND ALL COURSE LECTURES
2	Tardy: Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
3	Exam Attendance/Punctuality: Attendance is mandatory; absence is accepted with valid excuse.
4	Assignments & Projects: All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.
5	Cheating: Not tolerated and may lead to EXPELLING the student from the program
6	Plagiarism: Not tolerated AT ALL and may lead to EXPELLING the student from the program

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Emad

Rector of Sana'a University
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7	<p>Other policies:</p> <ol style="list-style-type: none"> 1. All devices must be on silent or at least on vibration during lectures/labs. 2. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 3. Any of type/ form of cheating is not allowed no matter what. 4. Maintain silence during lectures and disturbance is not allowed.
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Course Plan of Veterinary Internal Medicine (2)

X. - Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	Dr. Abdulraqeb Ali Alshami	Office Hours					
Location & Telephone No.	Sana'a Governorate 778466544	SAT	SUN	MON	TUE	WED	THU

Prepared by
Dr. Abdulraqeb Alshami

Quality Assurance Unit
Dr. Abdulraqeb Alshami

Dean of the Faculty
Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

Academic Development
Center & Quality
Assurance
Ass. Prof. Dr. Huda Al-
Emad

Rector of Sana'a University
Prof. Dr. Al-Qassim Mohammed Abbas



E-mail	Alshami.vet@gmail.com	8am 2pm	8am 2pm	8am 2pm	8am 2pm	8am 2pm	
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XI. Course Identification and General Information:						
1-	Course Title:	Veterinary Internal Medicine (2)				
2-	Course Number & Code:	IM465				
3-	Credit hours:	C.H				Total
		Th.	Seminar	Pr.	F. Tr.	
		3	-	1	-	4
4-	Study level/year at which this course is offered:	Fourth Year - Second Semester				
5-	Pre –requisite (if any):	IM464				
6-	Co –requisite (if any):	None				
7-	Program (s) in which the course is offered	Bachelor Veterinary Medicine				
8-	Language of teaching the course:	English language				
9-	System of Study:	Regular / Semesters				
10-	Mode of delivery:	Lectures and Practical				
11-	Location of teaching the course:	Faculty of Veterinary Medicine Building				

II. Course Description:	
<p>This course reviews internal diseases that effecting different body systems of animal species such as cattle, horses, sheep, goat and small animals. The etiology, clinical signs and pathogenesis of these diseases will be discussed in details as will as diagnosis, treatment and prevention. Students will learn concepts related to basic clinical examination, diagnostic principles and treatment for different animal species. Students will also be able to the development and application of appropriate professional attitudes, communication and problem solving skills</p>	

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II. Intended learning outcomes (ILOs) of the course:

After completing this course, students will be able to:

- a1- Describe appropriate management for abnormalities affecting growth and development.
- a2- Elucidate the causes, pathogenesis, clinical symptoms, diagnosis, treatment and prognosis of the diseases of liver and pancreas and urinary, cardiovascular, nervous and musculoskeletal system .
- b1- Interpret the incidence and most important symptoms and signs of disease in animals.
- b2- Recognize appropriate initial management for different animal emergencies.
- c1- Perform an adequate clinical examination for diseased animal and identify deviations from normal.
- c2- Formulate appropriate management plans for individual patients presenting with the most common internal medicine. The management plan should indicate investigations (and how they would be interpreted) as well as treatment.
- d1- Cooperate in work effectively and share learned knowledge.
- d2- Use new technology in veterinary extension and capability of use of recent communications tools like E mail, fax and internet connections.

V. Course Content:

A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Diseases of liver and pancreas: -Principles of hepatic disfunction	1,2	6

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	<ul style="list-style-type: none"> -Manifestation of liver and biliary diseases -Principles of treatment in diseases of the liver -Diffuse diseases of the liver -Diseases of pancreas 		
2	<p>Diseases of cardiovascular system:</p> <ul style="list-style-type: none"> - Principles of circulatory failure - Manifestation of circulatory failure -Arrhythmias -Diseases of the heart - Diseases of the blood vessels 	3,4	6
3	<p>Diseases of urinary system:</p> <ul style="list-style-type: none"> - Principles of renal insufficiency - Principles of treatment of urinary tract disease - Diseases of the kidney - Diseases of the bladder, ureters and urethra 	5,6	6
4	<p>Diseases of the hemolymphatic and immune systems:</p> <ul style="list-style-type: none"> -Hemorrhagic disease - lymphadenitis -Amyloidosis 	7	3
5	Mid-Term Exam	8	3
6	<p>Diseases of nervous system:</p> <ul style="list-style-type: none"> - Principles of nervous dysfunction - Principles of treatment of diseases of the nervous system - Diffuse diseases of the brain -Diseases of the meninges -Epilepsy -Diseases of the spinal cord 	9,10	6
7	<p>Diseases of musculoskeletal system:</p> <ul style="list-style-type: none"> -Diseases of muscles -Diseases of bones -Diseases of joints -Congenital defects of muscles, bones and joints 	11,12	6
8	Diseases of skin:	13,14	6

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	- Principles of treatment of diseases of the skin -Diseases of the epidermis and dermis -Diseases of the hair, wool, follicles, skin glands, horns and hooves		
9	Diseases of conjunctiva and external ear: - Diseases of conjunctiva - Congenital defects of the eyelids and cornea - Diseases of external ear	15	3
10	Final Exam	16	3
Number of Weeks /and Units Per Semester		16	48

b- Training Aspect:			
Order	Training Tasks	Week Due	Contact hours
1	Examination of liver and pancreas (cases, how to examine and treat)	1,2	4
2	Examination of cardiovascular system (cases, how to examine and treat)	3,4	4
3	Examination of urinary system (cases, how to examine and treat)	5,6	4
4	Examination of hemolymphatic and immune systems (cases, how to examine and treat)	7	2
5	Mid-Term Exam	8	2
6	Examination of nervous system (cases, how to examine and treat)	9,10	4
7	Examination of musculoskeletal system (cases, how to examine and treat)	11,12	4
8	Examination of skin (cases, how to examine and treat)	13,14	4
9	Examination of conjunctiva and external ear (cases, how to examine and treat)	15	2
10	Final Exam	16	2

Prepared by
Dr. Abdulraqeb Alshami

Quality Assurance Unit
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Ass. Prof. Dr. Abdu Alraoof
Al-Shawkany

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Number of Weeks /and Units Per Semester	16	32
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V. Teaching strategies of the course:

- Lectures using board, data shows and multimedia aids.
- Self-learning by preparing essay and presentations (computer and faculty library)
- Brainstorm
- Discussion
- Cooperative learning
- Practical training (Clinical demonstrations, practice of skills, and discussions).
 - (a) Field visits (farms and villages)
 - (b) General experimental animal teaching
 - (c) Clinical and small group sessions
 - (d) Outpatient clinic
- Tutorial classes (small group teaching)

VI. Assessment Methods:

- Written exam
- Practical exam
- Oral exam
- Quizzes
- Report assignments
- Discussion.

No.	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
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1	Participation, quizzes and assignments	2-14	10	10%
2	Mid-Term Exam	8	10	10%
3	Mid-Term Practical Exam	8	10	10%
4	Final Practical Exam	15	10	10%
5	Oral Exam	16	5	5%
6	Final Exam	16	55	55%
Total			100	100%

II. Learning Resources:

1- Required Textbook(s) (maximum two).

- Radostitis O.M., Gay C.C., Hinchcliff K. W. and Constable P. D. (2007): Veterinary Medicine, A textbook of the diseases of cattle, horses, sheep, pigs and goats 10th Ed. Baillere Tindall, London.
- Smith, B.P (2002): Large animal internal medicine, third ed., Mosby, St Louis, London, Philadelphia, Sydney, Toronto.

2- Essential References.

- Radostitis O.M., Gay C.C., Hinchcliff K. W. and Constable P. D. (2007): Veterinary Medicine textbook of the diseases of cattle, horses, sheep, pigs and goats 10th Ed. Baillere Tindall, London
- Smith, B.P (2002): Large animal internal medicine, third ed., Mosby, St Louis, London, Philadelphia, Sydney, Toronto.
- Textbook of veterinary internal medicine.

3- Electronic Materials and Web Sites etc.

- Journal of Veterinary Internal Medicine (<http://www.wiley.com/bw/journal.asp>)
- [American College of Veterinary Internal Medicine](#)
 - [Internal Medicine www.criticalcarevets.com](http://www.criticalcarevets.com)

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- [Internal Medicine www.animal-emergency.com](http://www.animal-emergency.com)
- [Central Texas Veterinary Specialty Hospital - Internal Medicine](#)
- [IVIS Bookstore: Ruminant Medicine - International Veterinary](#)
- [Alberta Agriculture, Food and Rural Development](#)

Livestock diseases and parasites.

- [American Association of Bovine Practitioners](#)

The American Association of Bovine Practitioners is an international association of veterinarians organized to enhance the professional lives of its members through relevant continuing education that will improve the well-being of cattle and the economic success of their owners, increase awareness and promote leadership for issues critical to cattle industries, and improve opportunities for careers in bovine medicine.

- [American Association of Small Ruminant Practitioners](#)
- [Animal Disease Information](#)

Animal disease factsheets, image database, power points, zoonotic fast facts, disease wall charts, etc.

- [Bovine Tuberculosis Eradication: Uniform Methods and Rules](#)

(PDF) These Uniform Methods and Rules (UM&R) are the minimum standards adopted and approved by the Animal and Plant Health Inspection Service (APHIS). They were established for the maintenance of tuberculosis-free accredited herds of cattle and bison and the maintenance of State or zone status in the U.S. Department of Agriculture's (USDA) tuberculosis eradication program. These minimum standards do not preclude the adoption of more stringent standards by any State or zone.

- [Cattle Diseases](#)

University of Nebraska - NU Institute of Agriculture and Natural Resources

- [Large Animal Veterinary Rounds](#)

Rounds transcripts presented at the Western College of Veterinary Medicine (University of Saskatchewan) Department of Large Animal Clinical Sciences. The transcripts are available in pdf format and are searchable by year.

- [Food Animal Production Medicine Nutrition Topics](#)

Publications, information, and data collection tools include: Herd Based Tests For Metabolic Disorders, Introduction To Ruminant Acidosis, Herd Based Diagnosis Of Ruminant Acidosis, Nutritional Management Of Ruminant Acidosis, Factors That Contribute To Ruminant Acidosis, Ketosis And Hepatic Lipidosis, Hypokalemia Article, Calcium Chloride Gel Treatment Of Parturient Dairy Cows, and a Herd Nutrition History And Evaluation Form.

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	<ul style="list-style-type: none"> • Small Ruminant Information <p>A variety of extension publications on sheep from the University of Missouri. Covering subjects from Care of Ewes and Lambs at Lambing Time to Mastitis in the Ewe.</p> <ul style="list-style-type: none"> • Equine Medicine • Pet Animals Medicine - News Results • Livestock Library
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X. Course Policies:	
1	<p>Class Attendance: MANDATORY TO ATTEND ALL COURSE LECTURES</p>
2	<p>Tardy: Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.</p>
3	<p>Exam Attendance/Punctuality: Attendance is mandatory; absence is accepted with valid excuse.</p>
4	<p>Assignments & Projects: All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.</p>
5	<p>Cheating: Not tolerated and may lead to EXPELLING the student from the program</p>
6	<p>Plagiarism: Not tolerated AT ALL and may lead to EXPELLING the student from the program</p>
7	<p>Other policies:</p> <ol style="list-style-type: none"> 5. All devices must be on silent or at least on vibration during lectures/labs. 6. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 7. Any of type/ form of cheating is not allowed no matter what. 8. Maintain silence during lectures and disturbance is not allowed.

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