



## **Course Specification of Veterinary parasitology (2)**

<b>I. Course Identification and General Information:</b>					
1	<b>Course Title:</b>	Veterinary parasitology (2)			
2	<b>Course Number &amp; Code:</b>	MI 355			
3	<b>Credit hours:</b>	<b>C.H</b>			
		<b>Theoretical</b>	<b>Practical</b>	<b>Training</b>	<b>Seminar</b>
		2	1	0	0
4	<b>Study level/ semester at which this course is offered:</b>	Third year: second semester			
5	<b>Pre –requisite (if any):</b>	MI 354			
6	<b>Co –requisite (if any):</b>				
7	<b>Program (s) in which the course is offered:</b>	Bachelor's degree (B. Sc.) Veterinary Medicine			
8	<b>Language of teaching the course:</b>	English			
9	<b>Location of teaching the course:</b>	Faculty of veterinary medicine			
10	<b>Prepared by:</b>	Dr. hamid Alrefaiey			
11	<b>Date of approval:</b>				

### **II. Course description:**

This course consists of theoretical and practical section is intended to familiarize the students with the essential facts and concepts of veterinary parasitology enabling them to control and prevent economical losses, parasitozoonoses. The lectures will discuss principal endo- and ectoparasites of domestic animals, which are of national or international importance to veterinary medical practice. Emphasis is placed on basic knowledge of parasite biology, epidemiology, pathogenesis, diagnosis, chemotherapy and control of parasitic infections. The purpose of the practical course is to highlight and expand on important parasites presented in lectures, especially identification and diagnostics. At the practical which follow the lectures the students become familiar with the methods of diagnosis including the interpretation of results.

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### 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:	
<b>A3</b>	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.	<b>a1-</b>	Describe the general characteristics morphology of Parasites and define the life cycles of some important Parasites.
<b>A4</b>	Describes the foundations and procedural steps for treating all diseases that affect different animals, highlighting the medical conditions that need surgical interventions.	<b>a2-</b>	Explain the different environmental aspects encourage the viability of parasites.

#### 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:			
<b>a1-</b>	Describe the general characteristics morphology of Parasites and define the life cycles of some important Parasites.	<ul style="list-style-type: none"> <li>▪ Lecture by data show</li> <li>▪ Dialogue and discuss</li> <li>▪ Practical practice</li> <li>▪ self directed learning skills.</li> <li>▪ Analyze the results and reach specific conclusion.</li> <li>▪ Writing a review paper to gain the skills of self-learning and presentation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Quiz</li> <li>▪ Oral examination</li> <li>▪ Practical examination</li> <li>▪ Activities</li> <li>▪ Reports evaluation</li> </ul>
<b>a2-</b>	Explain the different environmental aspects encourage the viability of parasites.		

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		-Sample collection, preservation, examination and identification.	
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<b>(B) Intellectual Skills:</b>			
Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: <b>Intellectual skills</b>			
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:	
<b>B3-</b>	Design appropriate nursing and treatment care plans for different diseases that affect animals, prioritizing treatment.	<b>b1-</b>	Interpret the environmental changes and incidence of parasitic infection.
<b>B4-</b>	Determines the appropriate and effective treatment; evaluates all medications used for each condition.	<b>b2-</b>	Clarify control measures in response to emerging and unexpected problems.
<b>Teaching And Assessment Methods For Achieving Learning Outcomes:</b>			
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:		<ul style="list-style-type: none"> <li>Dialogue and discuss</li> <li>Lecture</li> <li>Practical practice</li> <li>Problem solving</li> <li>Working in groups</li> <li>Labor training</li> <li>Researches and projects</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Oral examination</li> <li>Practical examination</li> <li>Performance notice</li> <li>Achievement file</li> <li>Reports evaluation</li> <li>Proposal evaluation</li> </ul>
<b>b1-</b>	Interpret the environmental changes and incidence of parasitic infection.		
<b>b2-</b>	Clarify control measures in response to emerging and unexpected problems.		

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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 ( <b>Sub-PILOs</b> ) in Professional and Practical Skills		Course Intended Learning Outcomes ( <b>CILOs</b> ) in Professional and Practical Skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
<b>C1-</b>	Accurately records a comprehensive pathological story of a sick animal including information on healthy behavior and the necessary checks.	<b>c1-</b>	Determine the infection with different parasitic species.
<b>C3-</b>	Treat animal patients safely and effectively considering the evaluation of the results, the appropriate modification of the treatment plan and the accurate description of the appropriate medications.	<b>c2-</b>	Apply the complete identification of parasitic samples.

### **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 ( <b>CILOs</b> ) in Professional and Practical Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:			
<b>c1-</b>	Determine the infection with different parasitic species.	-Practical practice -Problem solving -Working in groups	- Written examinations - Oral examinations - Practical examination
<b>c2-</b>	Apply the complete identification of parasitic samples.	-Collaborative learning -	- Performance notice - Achievement file - Reports evaluation - Proposal evaluation

### **(D) General / Transferable Skills:**

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Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: <b>General and Transferable skills</b>			
Program Intended Learning Outcomes ( <b>PILOs</b> ) in General / Transferable skills		Course Intended Learning Outcomes ( <b>CILOs</b> ) in General / Transferable skills	
After completing this program, students will be able to:		After completing this course, students will be able to:	
<b>D2-</b>	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.	<b>d1-</b>	Search the web for a given course topic to build up a review.
<b>D3-</b>	Practices problem-solving, negotiation, supervision and veterinary medical management skills and writing research reports efficiently and professionally.	<b>d2-</b>	Demonstrate appropriate professional attitudes and behaviors in different practice situations.

### 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 ( <b>CILOs</b> ) in General and Transferable Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		<ul style="list-style-type: none"> <li>▪ Dialogue and discuss</li> <li>▪ Working in groups</li> <li>▪ Scientific visits</li> <li>▪ Researches and projects</li> <li>▪ Self learning</li> <li>Problem solving</li> </ul>	<ul style="list-style-type: none"> <li>▪ Achievement file</li> <li>▪ Reports evaluation</li> <li>▪ Proposal evaluation</li> <li>▪ Performance notice</li> <li>Practical examinations</li> </ul>
<b>d1-</b>	Search the web for a given course topic to build up a review.		
<b>d2-</b>	Demonstrate appropriate professional attitudes and behaviors in different practice situations.		

## IV. Course Content:

### 1 – Course Topics/Items:

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a – Theoretical Aspect					
Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Number of weeks	Contact hours
1	Protozoology; introduction, classification	a1,a2,b1,b2,c1,c2	Parasitic Protozoa Introduction: structure and mechanism of performance of its vital functions. Classification	1	2
2	Family: Trypanosomatidae Family: Cryptosporidiidae	a1,a2,b1,b2,c1,c2	Genus: Trypanosoma Genus: Leishmania Genus Cryptosporidi	1	2
3	Family Trichomonadidae	a1,a2,b1,b2,c1,c2	Giardia & Entamoeba Genus Trichomonas	1	2
4	APICOMPLEXA Family: Eimeriidae	a1,a2,b1,b2,c1,c2	Genus eimeria: eimeria spp Poultry coccidiosis Bovine coccidiosis Ovine coccidiosis	1	2
5	Family: Sarcocystidae  Family: Plasmodiidae	a1,a2,b1,b2,c1,c2	Genus: Sarcocystis Genus: Toxoplasma  Genus: Plasmodium	1	2
6	Piroplasms: Family: Babesiidae Family: Theileriidae	a1,a2,b1,b2,c1,c2	Genus: Babesia Genus: Theileria	1	2
7	Subphylum : Sarcodina Family: Entamoebidae Subphylum : Ciliophora Subphylum : Myxospora Subphylum: Microspora	a1,a2,b1,b2,c1,c2	Genus Entamoeba Genus Ciliophora Genus Myxospora Genus Microspora	1	2
8	Veterinary Entomology:	a1,a2,b1,b2,c1,c2	Introduction Effect of arthropods on the health of animal and man.	1	2

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			Phylum: Arthropoda Morphology, development and life history Classification of arthropods of veterinary and medical importance.		
9	Veterinary Entomology: Order: Diptera	a1,a2,b1,b2,c1,c2	Family: Culicidae Family: Psychodidae Family: Ceratopogonidae	1	2
10	Veterinary Entomology: Order: Diptera	a1,a2,b1,b2,c1,c2	Family: Simuliidae Family: Tabanidae Family: Muscidae Family: Sarcophagid	1	2
	Veterinary Entomology: Order: Diptera	a1,a2,b1,b2,c1,c2	Family: Callophoridae Family: Oestridae Family: Hippoboscidae	1	2
	Veterinary Entomology: Class Insecta: Order : Phthiraptera Order : Siphonaptera Order : Hemiptera Order : Coleoptera Order : Hymenoptera	a1,a2,b1,b2,c1,c2	Lice : fleae : Important species of fleas Flea bite allergy Bug: BED BUGS KISSING BUGS Beetles: Ants	1	2
13	Veterinary Entomology: Order Orthoptera Class : Crustacea Class: Arachnida	a1,a2,b1,b2,c1,c2	cockroaches Family: Ixodidae (Hard Ticks)	1	2
14	Veterinary Entomology: Family: Argasidae Family: Sarcoptidae Family: Psoroptidae Family: Demodicidae Family: Dermanyssidae  Class: Pentastomida	a1,a2,b1,b2,c1,c2	Ticks : Common Hard Ticks Common Soft Ticks Tick Paralysis Tick Control  Mites : Itch and Mange Mites	1	2

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			Burrowing Mites Non-Burrowing Mites Other Mites Causing Skin or Tissue Irritation Other Mites Treatments		
<b>Number of Weeks /and Units Per Semester</b>				<b>14</b>	<b>28</b>

<b>b- Training Aspect:</b>				
Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	Protozoology: Morphology Diagnostic stages of parasites Examination of blood for detection trypanosoma	a1,a2,b1,b2,c1,c2	1	2
2	Trypanosoma spp	a1,a2,b1,b2,c1,c2	1	2
3	Trichomonas, cryptosporidium	a1,a2,b1,b2,c1,c2	1	2
4	Eimeria(coccidian) spp.	a1,a2,b1,b2,c1,c2	1	2
5	Entamoeba, Giardia spp.	a1,a2,b1,b2,c1,c2	1	2
6	Genus Histomonas, sarccocyst	a1,a2,b1,b2,c1,c2	1	2
7	Leishmania spp. , Plasmodium	a1,a2,b1,b2,c1,c2	1	2
8	Babesia, Theileria. Spp.	a1,a2,b1,b2,c1,c2	1	2
9	Introduction Of Arthropoda, Family Tabanidae: Morphology	a1,a2,b1,b2,c1,c2	1	2
10	CLASS INSECTA: LICE Anoplura (Sucking lice) and Mallophaga (Biting lice) Fleas: Important species of fleas	a1,a2,b1,b2,c1,c2	1	2
11	Family sarcoptidae: sarcoptes: Burrowing Mites, Non Burrowing Mites, Order Coleoptera : True Beetles, Blister	a1,a2,b1,b2,c1,c2	1	2

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	Beetles Dung Beetles			
12	Order Hemiptera: Bed Bugs Kissing Bugs Order Diptera: ARACHNIDS: VENOMOUS SPIDERS BLACK WIDOW - Latrodectus mactans FIDDLE-BACKED - Loxosceles reclusa Mosquitoes Other Blood Feeding flies MYIASIS PRODUCING DIPTERA Larvae	a1,a2,b1,b2,c1,c2	1	2
13	Family: Ixodidae: Ticks: Common Hard Ticks ,Common Soft Ticks.	a1,a2,b1,b2,c1,c2	1	2
14	Dermacentor, Oestrus, Order Orthoptera Cockroaches Grasshoppers	a1,a2,b1,b2,c1,c2	1	2
<b>Number of Weeks /and Units Per Semester</b>			<b>14</b>	<b>28</b>

#### **V. Teaching strategies of the course:**

- Lectures depending on the sharing efforts of the students and supported with macromedia and multimedia aids.
- Training in the laboratory
- Self-learning (Electronic learning, Seminars, scientific search on related websites, international, national and local journals, related books in faculty library).
- Summer training course.
- Assays and reviews.
- Discussion groups.
- Group work
- Problem Solving
- Assignments
- Brainstorming
- Log book
- Field visits

#### **3-Assessment Methods:**

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- Written examination: For assessment of knowledge, back calling and Intellectual skills.
  - Practical examination: For assessment of practical and professional skill.
  - Oral examination: For assessment of knowledge and Intellectual skills.
- Student activities: For assessment of knowledge and general and transferable skills.

## 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
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	13	10	10%	a1,a2,b1,b2,c1,c2
5	Oral Exam	13	5	5%	a1,a2,b1,b2,c1,c2
6	Final Exam	16	55	55%	a1,a2,b1,b2,c1,c2
<b>Total</b>			<b>100</b>	<b>100%</b>	

## VII. Students' Support:

Office Hours/week	Other Procedures (if any)
From Saturday to Wednesday at 8:00 a.m. till 2 p.m.	Student can contact with me via e-mail

## VIII. Learning Resource (MLA style or APA style)s:

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

- Foundation of parasitology .2006 by Larry S. Roberts (author),John Janovy (author).
- Hendrix CH.M. (1998): diagnostic veterinary parasitology (1998) by mosby Inc.

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	<b>2- Recommended Readings and Reference Materials</b>
	1- Veterinary Helminthology by Angus M.Dunn 2-Parasitology of Veterinarians by Jay George 3- Heminthes, Arthropods and Porotozoa Domesticated Animals by J.L. Soulsby. 4- Diagnostic Veterinary Parasitology by Charles M. Hendrix 5-Notes Book for students Veterinary Parasitology.
	<b>3- Essential References</b>
	-Abyladze, k. E. et al. (1990) : parasitology and infections disease, agriculturals animals . Mir publi Moscow, ussR in Russian. - Geffrey, H. C. et al. (1991) : Atlas of medical helminthology and protozoology . Churchill livingsto New York . - Georgi, J. R.; Georgi, N. E. (1990) : parasitology for veterinarians, . 5 Ed., Philadelphia, London . - Kassai, T. (1999) : Vet. Helminthology butterwoth – Heinemann . - Mehlhorn, H.; Duwel, D.; und raether, W. (1993) : Diagnose und Therapie der Parasiten von Haus Nutz-und Heimtieren . gustav fischer verlag Stuttgart . - Maff Adas (1986) : Manual of veterinary parasitological laboratory technigues . 3. Ed reference 4 HMSO, London. - Soulsby, E. J. L. (1986) : Helminths, arthropods and protozoa of domesticated animals 7. Ed. Bail tindall, London . -
	<b>4- Electronic Materials and Web Sites etc.</b>
	<u>Scientific Journals</u> <input type="checkbox"/> <a href="#">The journal of parasitology</a> <input type="checkbox"/> <a href="#">The journal of veterinary medical science.</a> <input type="checkbox"/> <a href="#">The journal of Veterinary parasitol.</a> <input type="checkbox"/> <a href="#">Korean journal of parasitology.</a> <u>Scientific websites</u> <input type="checkbox"/> <a href="http://www.cdc.org">http://www.cdc.org</a> <input type="checkbox"/> <a href="http://www.pubmed.org/">http://www.pubmed.org/</a> <input type="checkbox"/> <a href="http://www.sciencedirect.com/">http://www.sciencedirect.com/</a>
	<b>5- Other Learning Material:</b>

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<b>X. Course Policies:</b>	
<b>1</b>	<b>Class Attendance:</b> MANDATORY TO ATTEND ALL COURSE LECTURES
<b>2</b>	<b>Tardy:</b> Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
<b>3</b>	<b>Exam Attendance/Punctuality:</b> Attendance is mandatory; absence is accepted with valid excuse.
<b>4</b>	<b>Assignments &amp; Projects:</b> 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.
<b>5</b>	<b>Cheating:</b> Not tolerated and may lead to EXPELLING the student from the program
<b>6</b>	<b>Plagiarism:</b> Not tolerated AT ALL and may lead to EXPELLING the student from the program
<b>7</b>	<b>Other policies:</b> <ol style="list-style-type: none"> <li>1. All devices must be on silent or at least on vibration during lectures/labs.</li> <li>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.</li> <li>3. Any of type/ form of cheating is not allowed no matter what.</li> <li>4. Maintain silence during lectures and disturbance is not allowed</li> </ol>

## **Course Plan of Veterinary parasitology (2)**

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#### X. - Information about Faculty Member Responsible for the Course:

Name of Faculty Member	Hamid A. N. Alrefaiey	Office Hours					
Location & Telephone No.	Sana'a mobile 775336921	SAT	SUN	MON	TUE	WED	THU
E-mail	<a href="mailto:Hamid77Ali@gmail.com">Hamid77Ali@gmail.com</a> <a href="mailto:nagihamidali@gmail.com">nagihamidali@gmail.com</a>	8am 2pm	8am 2pm	8am 2pm	8am 2pm	8am 2pm	-

#### XI. Course Identification and General Information:

1-	Course Title:	Veterinary parasitology (2)			
2-	Course Number & Code:	MI 355			
3-	Credit hours:	C.H			
		Th.	Seminar	Pr.	F. Tr.
		2	-	1	
4-	Study level/year at which this course is offered:	Third year: second semester			
5-	Pre –requisite (if any):	MI 354			
6-	Co –requisite (if any):	None			
7-	Program (s) in which the course is offered	Bachelor's degree (B. Sc.) Veterinary Medicine			
8-	Language of teaching the course:	English			
9-	System of Study:	Regular / Semester			
10-	Mode of delivery:	Lectures and Practical			
11-	Location of teaching the course:	Faculty of veterinary medicine			

#### II. Course Description:

This course consists of theoretical and practical section is intended to familiarize the students with the essential facts and concepts of veterinary parasitology enabling them to control and prevent economical losses, parasitozoonoses. The lectures will discuss principal endo- and ectoparasites of domestic animals, which are of national or international importance to veterinary medical practice. Emphasis is placed on

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basic knowledge of parasite biology, epidemiology, pathogenesis, diagnosis, chemotherapy and control of parasitic infections. The purpose of the practical course is to highlight and expand on important parasites presented in lectures, especially identification and diagnostics. At the practical which follow the lectures the students become familiar with the methods of diagnosis including the interpretation of results.

#### I. Intended learning outcomes (ILOs) of the course:

After completing this course, students will be able to:

- a1- Describe the general characteristics morphology of Parasites and define the life cycles of some important Parasites.
- a2- Explain the different environmental aspects encourage the viability of parasites.
- b1- Interpret the environmental changes and incidence of parasitic infection.
- b2- Clarify control measures in response to emerging and unexpected problems.
- c1- Determine the infection with different parasitic species.
- c2- Apply the complete identification of parasitic samples.
- d1- Search the web for a given course topic to build up a review.
- d2- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

#### II. Course Content:

##### A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Protozoology; introduction, classification	1	2
2	Family: Trypanosomatidae ,Family: Cryptosporidiidae	2	2
3	Family Trichomonadidae	3	2
4	Phylum Apicomplexa : Family: Eimeriidae	4	2
5	Family: Sarcocystidae ,Family: Plasmodiidae	5	2

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6	Order Piroplasms: Family: Babesiidae, Family: Theileriidae	6	2
7	Subphylum : Sarcodina : Family: Entamoebidae Subphylum : Ciliophora ,Subphylum : Myxospora Subphylum: Microspora	7	2
8	Mid Exam	8	2
9	Veterinary Entomology: Introduction, classification	9	2
10	Veterinary Entomology: Order: Diptera	10	2
11	Veterinary Entomology: Order: Diptera	11	2
12	Veterinary Entomology: Order: Diptera	12	2
13	Veterinary Entomology: Class Insecta: Order : Phthiraptera, Order : Siphonaptera Order : Hemiptera, Order : Coleoptera Order : Hymenoptera, Order Orthoptera	13	2
14	Veterinary Entomology: Class : Crustacea, Class: Arachnida	14	2
15	Veterinary Entomology: Family: Argasidae, Family: Sarcoptidae Family: Psoroptidae, Family: Demodicidae Family: Dermanyssidae	15	2
16	Final exam	16	2
<b>Number of Weeks /and Units Per Semester</b>		<b>16</b>	<b>32</b>

### b- Training Aspect:

Order	Training Tasks	Week Due	Contact hours
1	Protozoology: Morphology Diagnostic stages of parasites Examination of blood for detection trypanosoma	1	2

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2	Trypanosoma spp	2	2
3	Trichomonus, cryptosporidium	3	2
4	Eimeria(coccidian) spp.	4	2
5	Entamoeba, Giardia spp.	5	2
6	Genus Histomonas, sarccocyst	6	2
7	Leishmania spp. , Plasmodium	7	2
8	Mid exam	8	2
9	Babesia, Theileria. Spp.	9	2
10	Introduction Of Arthropoda, Family Tabanidae: Morphology	10	2
11	Class Insecta: Lice Anoplura (Sucking lice) and Mallophaga (Biting lice) Fleas: Important species of fleas	11	2
12	Family sarcoptidae: sarcoptes: Burrowing Mites, Non Burrowing Mites, Order Coleoptera : True Beetles, Blister Beetles Dung Beetles	12	2
13	Order Hemiptera: Bed Bugs Kissing Bugs Order Diptera: ARACHNIDS: VENOMOUS SPIDERS BLACK WIDOW - Latrodectus mactans FIDDLE- BACKED - Loxosceles reclusa Mosquitoes Other Blood Feeding flies MYIASIS PRODUCING DIPTERA Larvae	13	2
14	Family: Ixodidae: Ticks: Common Hard Ticks ,Common Soft Ticks.	14	2
15	Dermacenter, Oestrus, Order Orthoptera Cockroaches Grasshoppers	15	2
16	Final exam	16	2
<b>Number of Weeks /and Units Per Semester</b>		<b>16</b>	<b>32</b>

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### III. Teaching strategies of the course:

- Lectures depending on the sharing efforts of the students and supported with macromedia and multimedia aids.
- Training in the laboratory
- Self-learning (Electronic learning, Seminars, scientific search on related websites, international, national and local journals, related books in faculty library).
- Summer training course.
- Assays and reviews.
- Discussion groups.
- Group work
- Problem Solving
- Assignments
- Brainstorming
- Log book
- Field visits.

### IV. Assessment Methods:

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

No.	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
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	13	10	10%
5	Oral Exam	13	5	5%

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6	Final Exam	16	55	55%
	Total		100	100%

## V. Learning Resources:

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

- Foundation of parasitology .2006 by Larry S. Roberts (author),John Janovy (author).
- Hendrix CH.M. (1998): diagnostic veterinary parasitology (1998) by mosby Inc.

### 2- Essential References.

- Abyladze, k. E. et al. (1990) : parasitology and infections disease, agriculturals animals . Mir publish Moscow, ussr in Russian.
- Geffrey, H. C. et al. (1991) : Atlas of medical helminthology and protozoology . Churchill livingston New York .
- Georgi, J. R.; Georgi, N. E. (1990) : parasitology for veterinarians, . 5 Ed., Philadelphia, London .
- Kassai, T. (1999) : Vet. Helminthology butterwoth – Heinemann .
- Mehlhorn, H.; Duwel, D.; und raether, W. (1993) : Diagnose und Therapie der Parasiten von Haus- und Heimtieren . gustav fischer verlag Stuttgart .
- Maff Adas (1986) : Manual of veterinary parasitological laboratory techniques . 3. Ed reference 418 HMSO, London.
- Soulsby, E. J. L. (1986) : Helminths, arthropods and protozoa of domesticated animals 7. Ed. Bailliere tindall, London .

### 3- Electronic Materials and Web Sites etc.

#### Scientific Journals

- ☐ The journal of parasitology
- ☐ The journal of veterinary medical science.
- ☐ The journal of Veterinary parasitol.
- ☐ Korean journal of parasitology.

#### Scientific websites

- ☐ <http://www.cdc.org>
- ☐ <http://www.pubmed.org/>

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<http://www.sciencedirect.com/>

#### VI. Course Policies:

<b>1</b>	<b>Class Attendance:</b> MANDATORY TO ATTEND ALL COURSE LECTURES
<b>2</b>	<b>Tardy:</b> Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
<b>3</b>	<b>Exam Attendance/Punctuality:</b> Attendance is mandatory; absence is accepted with valid excuse.
<b>4</b>	<b>Assignments &amp; Projects:</b> 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.
<b>5</b>	<b>Cheating:</b> Not tolerated and may lead to EXPELLING the student from the program
<b>6</b>	<b>Plagiarism:</b> Not tolerated AT ALL and may lead to EXPELLING the student from the program
<b>7</b>	<b>Other policies:</b> <ol style="list-style-type: none"> <li>1- All devices must be on silent or at least on vibration during lectures/labs.</li> <li>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.</li> <li>3- Any of type/ form of cheating is not allowed no matter what.</li> <li>4- Maintain silence during lectures and disturbance is not allowed.</li> </ol>

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