Beni-Suef University
Faculty of Veterinary Medicine
Department of parasitology

Program Specification for doctorate of philosophy
2017-2018

A-Basic information:

1- Course title: *PhD VSC.* **Specialty:-**
2- **Program type:** *Single*
3- **Department offering program:**
4- **Academic year:** *2017-2018*
5- **Approval date of Department Council:**
6- **Approval date of Faculty Council:**
7-External evaluator:

B-Professional information:

1- Overall aims of the program:

1- Recognize all theories, principles and basics of his/her area of learning and other related sciences.
2- Provide graduates the opportunity to develop communication skills.
3- Master the skills and management of parasitology scientific research.
4- Work continuously for increasing knowledge in parasitology professional practice.
5- Master the various methods of data collection and application of analytical and critical approach in parasitology.
6- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.
7- Be aware of current parasitology and public health problems and recent related approaches.

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:
By the end of this PhD program the graduate should be able to:
al- Describe advanced research techniques used in the field of vet6erinary parasitology
a2- apply their knowledge and understanding of parasitology to the critical analysis and discussion of the scientific literature.
a3- Acquire up to date concepts in veterinary parasitology and public health practice and other career related sciences.
a4- Perceive advanced veterinary parasitology scientific research principles, regulations, ethics and its different tools.
a5- Connect up to date veterinary parasitology professional practice regulations and ethics.

a6- Sustain control in veterinary parasitology professional practices.
a7- Select efficiently of the veterinary parasitology professional practice effects on community development and environment protection.

b- Intellectual capacity:

By the end of this PhD program the graduate should be able to:

b 1- Analyze and evaluate relevant veterinary parasitology information for standardization and conclusion.
b2- Solve specialized veterinary parasitology and community problems by utilizing available resources.
b3- Perform scientific parasitology research studies with applied impact.
b4- Edit scientific papers with high impact factor (reputable journals).
b5- Assess the risk in veterinary parasitology professional practice.
b6- Plan for the improvement of veterinary parasitology performance.
b7- Make a decision making in variable professional practices.
b8- Invent and innovate.

c- Professional and practical skills:

By the end of this PhD program the graduate should be able to:

c1- Master the up to date recent veterinary parasitology professional skills.
c2- Write and assess the veterinary parasitology professional reports.
c3- Evaluate and improve the available and required material, tools and equipment in veterinary parasitology research projects.
c4- Utilize the up to date technology in veterinary parasitology professional and research practice.
c5- Utilize the regulations and indicators for performance evaluation.

d- General and transferable skills:

On successful completion of this program the graduate should be able to:

dl- Demonstrate an ability to learn independently in preparation for a career of lifelong learning .
d2- Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects
d3- present research finding in oral and written from using arrange of appropriate soft ware (e.g., power point , word , excel and data base).

3- Academic standards:

* The faculty mission, vision and strategic objective are confirmed to the academic standard. The learning outcomes are inline with the department and the faculty mission.
* Postgraduates NARS (March 2009) Master degree chapter issued by national authority for quality assurance and accreditation of education (NAQAAE) and Veterinary medicine post graduate academic standards (ARS) for the faculty of veterinary medicine, Beni-Suef University, Beni-Suef, Egypt are selected to confirm the appropriateness of the academic standards .
ARS (National Academic Reference Standards) prepared by NAQAAE.

4- Curriculum Structure and Contents

a-Program duration: 48 weeks.

b-Program structure: 3-5 preliminary courses

☒ Hours/ week:

Theoretical 5-8 Practical 6-8 Total 11-16

Preliminary courses

Code	Course title	Hours /week		Academic year	Teaching duration
		theoritical	practical		
According to selected courses	Selected (3-5) PhDcourses from the various Faculty Departments programs depending on the thesis title.	5-8	6-8	Preliminary year	36 weeks

D- Courses contents

See courses specification

5- Program Admission Requirements:

* According to the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate Programs, applicants should have a master degree in the specialization subject he will register in one of the Egyptian Universities or an equivalent degree from any approved university or another recognized scientific institute.
* According to Beni-Suef University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects:
1-English language (Toefl or equivalent degree)
* Admission to the program is open during March and September annually.
*The faculty council has the right to suspend the student enrolment for a certain period if he has acceptable excuse preventing him from continuing his study or research.

6- Regulations for Progression and Program Completion:

After finishing the preliminary courses, the graduate student will be eligible to sit for the examination according to the following roles:

No. of course teaching hours/ week	Allowed written examined time	Degree	
		Theoretical	Practical and oral exam
≥ 3 hours	3 hours	50	50
≤ 3 hours	2 hours	25	25

-The faculty council has the right to deprive the applicant from entering the exams if his attendance courses is less than 75% .
-Failure or depriving from entering one or more course did not requires reexamination of

successful passed courses.
-The applicant should submit a seminar within 2years after registration about his research and specialization subject filed that accepted by a committee of professors and assistant professors (3 in number).
-The applicant should submit the thesis that accepted by the judging committee in an open discussion and the following polices should be met:
-Pass all preliminary curriculums successfully.
-Acceptance of the seminar presented by the applicant.
-The applicant should publish at least two scientific papers from the thesis in local or international journals

Qualification grades:

Excellent	≥ 90
Very good	≥80
Good	≥70
Pass	≥60
Failed	45 to less than 60 weak
	Less than 45 Very weak

After passing, the graduate starts research for Ph.D. Thesis at the beginning of the second year. The candidate will receive his degree after evaluating and approving the thesis by a committee according to University regulations.

7-Graduate student assessment:

A- Assessment Tools

According the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate, students should be assessed at the end of preliminary year and the thesis should be evaluated and approved by a committee after at least three years from registration date according to University regulations.

Preliminary year

Assessments methods for each course	**practical exam**	**Oral exam**	**Written exam**
Time of Assessments	By the end of the year	By the end of the year	By the end of the year
Marks	25	25	50

Ph.D. Thesis:

The Ph.D. students should prepare a thesis in veterinary parasitology. The department and the ethical committees must approve the protocol of the research. The thesis includes a review part with a practical part. The thesis is supervised by two or more staff members and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee according to University regulations.

Assessments methods	Matrix alignment of the measured ILOs			
	K&U (a)	I.S (b)	P&P. S (c)	G&T. S (d)
Written exam	5,7,8	1,3,6	1,2,4,5,6,	-----
Practical exam	1,2,3,4,	3,4,5,6,	1.2.3.4.6.	1.2.3.4
Oral exam	1,2,3,4,5	1,2,4,5,6,	1.7	1,2,3,4

B- Matrix alignment of the measured ILOs

8- Evaluation of Program Intended Learning Outcomes:

Evaluator	Tool	Sample
1. Post graduate Students	Questionnaire at the end of the program	All the PG students
2. External Evaluators	Review program and courses Attending the final exam	Once before implementation annual report
3. College Quality Assurance committee	Annual program reviewer	

Program course ILOs matrix

PhD Program Specification Matrix (Program Courses with ILOS)

Program ILOs		courses
Knowledge and understanding	a1	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	a2	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	a3	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	a4	ph-95 ph-96,ph97, ph-98, ph-100, ph-101, ph-102 and thesis
	a5	ph-95 ph-96,ph97, ph-99, ph-101, ph-102.
	a 6	ph-95
	a 7	ph-95
	a 8	ph-95
	a 9	ph-95
Intellectual skills	b1	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	b2	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	b3	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	b4	ph-95 ph-96,ph97, ph-98, ph-100, ph-101, ph-102 and thesis
	b5	ph-96,ph97, ph-101, ph-95 ph-102.
	b 6	ph-95 and thesis
	b 7	ph-95
Professional and practical skills	c1	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	c2	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	c3	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	c4	ph-95 ph-96, , ph-98, ph-99, ph-100, ph-101, ph-102 and thesis
	c5	ph-96, , ph-100, ph-101, ph-95 ph-102.
	C6	ph-95
General and transferable skills	**d1**	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101,

		ph-102. .
	d2	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	d3	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	d4	ph-95 ph-96,ph97, ph-98, ph-99, ph-100, ph-101, ph-102.
	d5	ph-95 ph-96,ph97, ph-98, , ph-101.
	d 6	ph-95 ph-96
	d 7	ph-95 ph-96
	d 8	ph-95 ph-96
	d 9	ph-95 ph-96

Course coordinator **Head of the Department**

Program ILOs / **Program ILOS**		**Program aims**						
		a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
Knowledge and	al- Describe advanced research techniques used in the field of veterinary	√		√	√			

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	parasitology							
	a2- apply their knowledge and understanding of parasitology to the critical	√		√	√			
	analysis and discussion of the scientific literature.	√				√	√	
	a3- Acquire up to date concepts in veterinary parasitology and public health practice and other career related sciences.	√		√	√			√
	a4- Perceive advanced veterinary parasitology scientific research principles, regulations,			√	√	√		

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		a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
	ethics and its different tools.							
	a5- Connect up to date veterinary parasitology professional practice regulations and ethics.			√	√	√		
	a6- Sustain quality control in veterinary parasitology professional practices.			√	√			
Intellectual skills	b 1- Analyze and evaluate relevant veterinary parasitology information for standardization and conclusion.	√			√	√		

Program ILOs / Program ILOS	Program aims						
	a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
b2- Solve specialized veterinary parasitology and community problems by utilizing available resources.			√	√	√		√
b3- Perform scientific parasitology research studies with applied impact.			√	√			
b4- Edit scientific papers with high impact factor (reputable journals).	√		√		√	√	
b5- Assess the risk in veterinary parasitology professional practice.			√				√
b6- Plan for			√	√		√	

Program ILOs / Program ILOS		Program aims						
		a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
	the improvement of veterinary parasitology performance.							
	b7- Make a decision making in variable professional practices.							√
Practical and professional skills	c1 Master the up to date recent veterinary parasitology professional skills	√		√	√		√	
	c2 Write and assess the veterinary parasitology professional reports			√	√	√		
	c3 Evaluate and improve the available and required material, tools and equipment				√	√		

Program ILOs / Program ILOS		Program aims						
		a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
	in veterinary parasitology research projects							
	c4 Utilize the up to date technology in veterinary parasitology professional and research practice	√			√	√		
	c5 Utilize the regulations and indicators for performance evaluation				√	√		
General and t	dl- Demonstrate an ability to learn independently in preparation for a career of lifelong learning	√		√	√		√	
	d2 Demonstrate interpersonal skills and	√		√			√	

Program ILOs / Program ILOS		Program aims						
		a- Recognize all theories, principles and basics of his/her area of learning and other related sciences	b- Provide graduates the opportunity to develop communication skills	c- Master the skills and management of parasitology scientific research	d- Work continuously for increasing knowledge in parasitology professional practice	e- Master the various methods of data collection and application of analytical and critical approach in parasitology	f- Integrate the specialized and related knowledge to conclude and develop the interdisciplinary relations.	g- Be aware of current parasitology and public health problems and recent related approaches
transferable skills	team working ability by the successful completion of collaborative learn assignment and the honors researches projects							
	d3 present research finding in oral and written from using arrange of appropriate soft ware (e.g., power point , word , excel and data base).	√	√					

PhD Program Specification Matrix (Program ILOS with Academic standers ARS)

Academic standers		Knowledge and understanding						Intellectual skills									Professional and practical skills						General and transferable skills					
rogram LOs		**a 1**	a 2	**a 3**	**a 4**	**a 5**	**a 6**	**b 1**	**b 2**	**b 3**	**b 4**	**b 5**	**b 6**	**b 7**	**b 8**	**b 9**	**c 1**	**c2**	**c 3**	**c 4**	**c5**	**c 6**	**d 1**	**d 2**	**d 3**	**d 4**	**d 5**	**d 6**
Knowledge and understanding	a1		√																									
	a 2					√																						
	a 3	√																										
	a 4		√																									
	a 5			√																								
	a 6				√																							
	a 7					√																						
ntellectual skills	b1							√																				
	b 2								√																			
	b 3									√																		
	b 4										√																	
	b 5											√																
	b 6												√															
	b 7													√														
	b 8														√													
rofessional and ractical skills	c1																√											
	c2																	√										
	c3																		√									
	c4																			√								
	c5																				√							
General and ransferable skills	**d 1**																								√			
	d 2																									√	√	
	d 3																									√		

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

-Basic information

Course Code:	**PhD-95**
Course title :	Advanced Parasitology
Program title:	Doctorate of Philosophy
Contact hours/ week	2hrs/ practical 2hrs/ theoretical total 4hrs
Approval Date	

2-Professional information

Overall aims of course:

1. Recognize trematodes of importance (Fasciolidae & Paramphistomatidae); morphology, life cycle and pathogenesis.
2. Compare between morphology, life cycle and pathogenesis of cestodes (Anoplocephalidae, Taeniidae).
3. Realize morphology, life cycle and pathogenesis of nematodes (*Toxocara*, *Toxoascaris*, Trichostrongylidae, Spiroroidea, Tricheniloidea)
4. Identify myiasis, flies producing and specific myaisis.
5. Compare between ticks and mites.
6. Differentiate between the cyst forming parasites and blood parasites infecting animals.
7. Interpret principles and basics in parasites control.
8. Master efficiently advanced diagnostic techniques for animal parasites.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1. Realize trematodes of importance (Fasciolidae & Paramphistomatidae); morphology, life cycle and pathogenesis.
a.2. Recognize morphology, life cycle and pathogenesis of Cestodes (Anoplocephalidae, Taeniidae).
a.3. Illustrate morphology, life cycle and pathogenesis of nematodes (*Toxocara*, *Toxoascaris*, Trichostrongylidae, Spiroroidea, Tricheniloidea).
a.4. Comprehend Crustacea of veterinary importance.
a.5. Identify myiasis, flies producing and specific myaisis .
a.6. Summarize the highly prevalent ectoparasites (ticks and mites).
a.7. Write about morphology, life cycle and pathogenesis of Trypanosomatidae, *Babesia*, *Theileria* and *Anaplasma*.
a.8. Identify the cyst forming parasites (*Toxoplasma*, *Neospora*, *Sarcocystis* and *Eimeria*).
a.9. Illustrate efficiently advanced diagnostic techniques for animal parasites and basics of control.

b-Intellectual skills

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

b.1. Compare between morphology, life cycle and pathogenesis of different parasitic affections of trematodes, cestodes and nematodes.
b.2.Relate myiasis, flies producing and specific myaisis.
b.3. Differentiate between ticks and mites.
b.4. Correlate between different blood parasites (Trypanosomatidae, *Babesia*, *Theileria* and

Course specification of postgraduate

Anaplasma).
b.5. Interpret the cyst forming parasites (*Toxoplasma*, *Neospora*, *Sarcocystis* and *Eimeria*).
b.6. Deal with Crustacea of veterinary importance
b.7. Utilize efficiently advanced diagnostic techniques for animal parasites and basics of control.

c- Professional and practical skills

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

c.1. Master the skills of handling and preservation of samples.
c.2. Perform morphological examinations of parasites.
c.3. Write efficiently scientific paper and dissertation.
c.5. Evaluate and improve the available and required material, tools and equipment in veterinary parasitology research projects.
c.6. Manage the up to date technology in veterinary professional and research practice.

d- General and transferable skills

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

d.1. Work effectively in a team and manage the time.
d.2. Gain experience in scientific reporting, presentation and discussion.
d.3. Communicate effectively and use of information technology in the development his specialty.
d.4. Own Self-evaluation and need assessment.
d.5. Lead a team work in different professional practice
d.6. Have continuous and self-learning.
d.7. Educate the others and evaluate their performance.
d.8. Manage the scientific meetings and discussions.
d.9. Manage the time efficiently.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week)	Introduction to high prevalent parasites in our country.	8	4	4
	Trematodes of importance (Fasciolidae & Paramphistomatidae).	16	8	8
	Cestodes (Anoplocephalidae, Taeniidae)	16	8	8
	Nematodes (*Toxocara*, *Toxoascaris*, Trichostrongylidae, Spiroroidea, Tricheniloidea)	32	16	16
	Introduction to veterinary protozoa.	2	1	1
	Trypanosomatidae.	12	6	6
	Toxoplasma, *Sarcocystis*, *Neospora* and *Eimeria*	10	5	5
	Babesia, *Theileria* and *Anaplasma*	10	5	5
	Introduction to highly prevalent ectoparasites.	6	3	3
	Crustacea of veterinary importance.	4	2	2
	Diptera, flies producing myiasis, specific myaisis.	16	8	8
	Ticks and mites. Advanced diagnostic techniques for animal parasites (Master the skills of handling and preservation of samples, perform	12	6	6

Course specification of postgraduate

	morphological examinations of parasites, write efficiently scientific paper and dissertation, evaluate and improve the available and required material, tools and equipment in veterinary parasitology research projects and manage the up to date technology in veterinary professional and research practice).			
	Total	144	72	72

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4- Video movies for students of special needs.

6-Student assessment

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Written Exam	a1 to a9	b1 to b7	c1 to c6	
Practical Exam	a1 to a9	b1 to b7	c1 to c6	
Oral Exam	a1 to a9	b1 to b7		d1 to d9

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
Total	100%

Course specification of postgraduate

7- List of references

7.1. Notes and books

a. Department lecture book.

b. Illustrated practical notes of the department**.**

7.2. Essential books:

a- Helminths, Arthropods & Protozoa of domesticated Animals., E.J.L. Soulsby (1982).

b- Parasitology: the biology of animal parasites 5th.ed., Elmer.R.Nable., 1982.

c- Molecular biology of parasitic protozoa. Deborah F. Smiths.1996.

d- Veterinary Parasitology 2th ed., G.M. Marqubart, 1995.

e- Parasitology for Veterinarians. 9th ed. Dwight D.., (2009).

7.3. Recommended texts

a-Veterinary parasitology.2th.ed., G.M.Marqubart., 1995.

b- Parasitology for veterinarians. 9th.ed. Dwight.D.., (2009)..

7.4. Journals, Websites ……..etc

Journals:

Veterinary Parasitology.

Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

http://www.journals.elsevier.com/veterinary-parasitology/

Websites:

WWW.Science direct

WWW. Pubmed.com

WWW.Scholar google.com

WWW.welly interscience

Course Coordinators **Head of Department**

Beni Suef University
Faculty of Veterinary Medicine

Course specification

	Topics	Week	Intended learning outcomes of course (ILOs)			
	Advanced Parasitology		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Introduction to high prevalent parasites in our country	2	a1- a2- a3- a4-a5-a6-a7-a8-a9	b1- b2- b3- b4-b5-b6-b7	c1- c2- c3-c4-c5-c6-	d1-d2-d3-d4- d5-d6-d7
2	Trematodes of importance (Fasciolidae & Paramphistomatidae)	4	a1- a2- a3- a4-a5-a6-a7	b1- b2- b3- b4-b5-b6-	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d7-d9
3	Cestodes (Anoplocephalidae, Taeniidae)	4	a1- a2- a4-a5-a6-a9	b1- b2- b3- b4-b5-b6-	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d7-d8
4	Nematodes (*Toxocara*, *Toxoascaris*, Trichostrongylidae, Spiroroidea, Tricheniloidea)	8	a1- a2- a3- a4-a5-a6-a8	b1- b2- b4-b5-b6-b7	c1- c2- c3-c4-c5	d1-d2-d3-d4- d5-d6-d7-d9
5	Introduction to veterinary protozoa.	1	a1- a2- a3- a4-a5-a6-a9	b1- b2- b3- b4-b5 -b7	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d7-d9
6	Trypanosomatidae.	2	a1- a2- a3- a4-a5-a6-a7-a8	b1- b2- b3- b4-b5-b6-b7	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d8
7	*Toxoplasma*, *Sarcocystis*, *Neospora* and *Eimeria*	2	a1- a2- a3- a4-a5-a6-a8-a9	b1- b2- b3- b4-b5-b6-b7	c1- c2- c3-c4-c5	d1-d2-d3-d4- d5-d6-d7
8	*Babesia*, *Theileria* and *Anaplasma*	2	a1- a2- a3- a4-a5-a6	b1- b2- b3- b4-b5	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d9
9	Introduction to highly prevalent ectoparasites.	2	a1- a2- a3- a4-a5-a8-a9	b1- b2- b3- b4-b6 -b7	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4-d7
10	Crustacea of veterinary importance.	1	a1- a2- a3- a4-a5-a6-a7-a8	b1- b2- b3- b4-b5-b6-b7	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d9
11	Diptera, flies producing myiasis, specific myaisis.	4	a1- a2- a3- a4-a5-a6-a7-a8	b2- b3- b4-b5-b6-b7-b8-b9	c1- c2- c3-c4-c5-c6	d1-d2-d3-d4- d5-d6-d7-d8

Course specification

12	Ticks and mites. Advanced diagnostic techniques for animal parasites (Master the skills of handling and preservation of samples, perform morphological examinations of parasites, write efficiently scientific paper and dissertation, evaluate and improve the available and required material, tools and equipment in veterinary parasitology research projects and manage the up to date technology in veterinary professional and research practice).	4	a1- a2- a3- a4-a5-a6-a7-a8	b1- b2- b3- b4-b5-b6-		

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD-96**
Course title :	Poultry & Rabbits parasites
Program title:	Doctorate of Philosophy
Contact hours/ week	2hrs/ practical 2hrs/ theoretical total 4hrs
Approval Date	

2-Professional information

Overall aims of course:

1. Interpret specific helminths affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).
2. Utilize efficiently specific external parasites affecting birds and rabbits (morphology, biology, pathogenesis and control).
3. Differentiate specific protozoa affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).
4. Be aware about pathogenesis and control of different parasites infecting birds and rabbits.
5. Maser advanced diagnostic techniques to diagnose poultry parasites.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1. Recognize morphology and biology of helminths affecting different organs of birds and rabbits.
a.2. Realize morphology and biology of specific protozoa affecting different organs of birds and rabbits.
a.3. Summarize morphology and biology of specific external parasites affecting birds and rabbits.
a.4. Comprehend efficiently different diagnostic methods for poultry parasites.
a.5. Write about pathogenesis and control of different parasites infecting poultry and rabbits.

b-Intellectual skills

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

b.1. Differentiate between different protozoa affecting birds and rabbits.
b.2. Compare between morphology and biology of different helminths affecting birds and rabbits .
b.3.Correlate morphology and biology of different external parasites affecting birds and rabbits .
b.4. Interpret pathogenesis and control of different poultry parasites.
b.5. Utilize advanced diagnostic techniques to diagnose poultry parasites.

C- Professional and practical skills

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

c.1. Master the skills of handling and preservation of infected samples.
c.2. Perform morphological examinations of parasites.
c.3. Write efficiently scientific paper and dissertation.
c.4. Evaluate the available and required material, tools and equipment in poultry parasites research projects.
c.5. Mange advanced techniques for diagnosis of poultry parasites.

d- General and transferable skills

Course specification of postgraduate

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

d.1. Work effectively in a team and manage the time.
d.2. Gain experience in scientific reporting, presentation and discussion.
d.3. Communicate effectively and use information technology in developing his specialty.
d.4. Own Self-evaluation and need assessment.
d.5. Lead a team work in different professional practice
d.6. Have continuous and self-learning.
d.7. Educate the others and evaluate their performance.
d.8. Manage the scientific meetings and discussions.
d.9. Manage the time efficiently.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week)	Specific helminths affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).	40	20	20
	Specific external parasites affecting birds and rabbits (morphology, biology, pathogenesis and control).	40	20	20
	Specific protozoa affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).	40	20	20
	Advanced diagnostic techniques (Master the skills of handling and preservation of infected samples, perform morphological examinations of parasites, write efficiently scientific paper, evaluate the available and required material, tools and equipment in poultry parasites).	24	12	12
	Total	144	72	72

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4- Video movies for students of special needs.

6-Student assessment

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Written Exam	a1 to a5	b1 to b5	c1 to c5	
Practical Exam	a1 to a5	b1 to b5	c1 to c5	
Oral Exam	a1 to a5	b1 to b5		d1 to d9

Course specification of postgraduate

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
Total	100%

7- List of references

7.1. Notes and books

7.2. Essential books:

a- Helminths, Protozoa and Arthropods of Domesticated Animals: Soulsby, E.J.L., 7th edition. Bailliere Tindall, London, (1982).
b- Parasitology: the biology of animal parasites.5th.ed., Elmer.R.Nable., 1982
c- Medical parasitology.3th.ed. R.L. Ichhpujani. 2002.
d- Parasitic diseases of wild mammals.2th.ed. William. M. Samuel. 2001.
e- Clinical parasitology. Elizabeth. A. Zeibig. 1997.
f- Veterinary Parasitology.2th.ed., G.M.Marqubart., 1995.
g- Medical Parasitology.10th.ed. N.C. Dey. 1997.

7.3. Recommended texts

a- Clinical Parasitology. Elizabeth. A. Zeibig. 1997
b- Veterinary Parasitology.2th ed., G.M.Marqubart., 1995.

7.4. Journals, Websites ……..etc

Journals:

Veterinary Parasitology.
Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

http://www.journals.elsevier.com/veterinary-parasitology/

Websites:

WWW.Science direct
WWW. Pubmed.com
WWW.Scholar google.com
WWW.welly interscience

Course Coordinators **Head of Department**

Course specification of postgraduate

Course specification

	Topics	Week	Intended learning outcomes of course (ILOs)			
	Poultry & Rabbits parasites		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Specific helminths affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).	10	a1- a2- a3- a4-a5-	b1- b2- b3- b4-b5- b6-b7	c1- c2- c3-c4-c5-	d1-d2-d3-d4- d5-d6- d9
2	Specific external parasites affecting birds and rabbits (morphology, biology, pathogenesis and control).	10	a1- a2- a3- a4-a5-	b1- b2- b3- b4-b5- b6-b8	c1- c2- c3-c4-c5-	d1-d2-d3-d4- d5-d6- d7-d8
3	Specific protozoa affecting different organs of birds and rabbits (morphology, biology, pathogenesis and control).	10	a1- a2- a3- a4-a5-	b1- b2- b3- b4-b5- b6-b8	c1- c2- c3-c4-c5-	d1-d2-d3- d5-d6-d7- d8
4	Advanced diagnostic techniques (Obtain samples for different parasitological diagnostic purposes and its preservation, perform morphological examinations of parasites, write efficiently scientific paper, evaluate the available and required material, tools and equipment in poultry parasites).	6	a1- a2- a3- a4-a5-	b1- b2- b3- b4-b5- b7-b8	c1- c2- c3-c4-c5-	d1-d2-d3-d4- d5-d8- d9

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD 97**
Course title :	**Fish Parasites**
Program title:	
Contact hours/ week	Theoritical:2 Practical :2 Total:4
Approval Date	

2-Professional information

Overall aims of course:

1- Utilize efficiently the nomenclature and classification of fish parasites and its aquaria with reference to the significant species in Egypt.
2- Master the skills of identification of the different parasitic species (monogenea, digenea, cestodes, nematodes, acanthocephalans, arthropods and protozoa) of fish in terms of their life cycle and pathogenesis.
3- Differentiate specific zoonotic parasites affecting fish.
4- Interpret different ways of diagnosis, treatment and control of fish parasites.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1- Realize classification of fish parasites and its aquaria with reference to the significant species in Egypt.

a.2- Write about life cycle of different parasitic species (monogenea, digenea, cestodes, nematodes, acanthocephalans, arthropods and protozoa) of fish.

a.3- Summarize the pathogenesis of monogenea, digenea, cestodes, nematodes, acanthocephalans, arthropods and protozoa of fish.

a.4- Comprehend diagnosis, treatment and control of fish parasites.

a.5- Recognize specific zoonotic parasites affecting fish.

b-Intellectual skills

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

b.1- Differentiate parasitic species belonging to monogenea (in skin and gills) and digenea (in internal organs and muscles) of fish in terms of their life cycle and pathogenesis.

b.2- Interpret cestodes affecting specific organs of fish in terms of their life cycle and pathogenesis.

b.3- Correlate life cycle, and pathogenesis of nematodes, acanthocephalans, external arthropods and protozoa in different fish species.

b.4- Utilize different ways of diagnosis, treatment and control of fish parasites.

b.5- Adapt advanced and modern methods for modify the hygienic measurements during preparation of fish meal to overcome the parasitic diseases.

C- Professional and practical skills

Course specification of postgraduate

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

c.1- Mange advanced techniques for diagnosis of fish parasites.

c.2- Master the skills of handling and preservation of infected samples.

c.3- Evaluate, diagnose and report the spread of diseases of fish based on the gained experience of identification.

d- General and transferable skills

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

d.1- Work effectively in a team and manage the time.

d.2- Own experience in scientific reporting, presentation and discussion.

d.3- Utilize efficiently library facilities, computer skills, etc.

d.4. Educate identification and diagnostically approach to parasitic-borne disease conditions.

d.5. Utilize internet to update the information in the field of fish parasites

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week)	Introduction of fish parasites	12	6	6
	Classification of fish parasites and its aquaria with reference to the significant species in Egypt.	12	6	6
	Monogenea (in skin and gills) of fish (life cycle, and pathogenesis).	8	4	4
	Digenea (in internal organs and muscles) of fish (life cycle, and pathogenesis).	8	4	4
	Cestodes affecting specific organs of fish (life cycle, and pathogenesis).	24	12	12
	Nematodes affecting different organs of fish (life cycle, and pathogenesis).	16	8	8
	Acanthocephala in different fish species (life cycle, and pathogenesis).	8	4	4
	Protozoa affecting different organs of fish (life cycle, and pathogenesis).	12	6	6
	External arthropods affecting of fish (life cycle, and pathogenesis).	16	8	8
	Different ways of treatment and control of fish parasites	4	2	2
	Specific zoonotic parasites affecting fish.	8	4	4
	Advanced and modern methods for modify the hygienic measurements during preparation of fish meal to overcome the parasitic diseases.	4	2	2
	Advanced techniques for diagnosis of fish parasites	12	6	6

Course specification of postgraduate

	(Collection, handling, staining and preservation of infected samples). Write a report for the spread of certain diseases of fish based on the gained experience of identification.			
	Total	144	72	72

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4- Video movies for student of special need.

6-Student assessment

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Written Exam	a1- a2- a3- a4	b1- b2- b3- b4-b5	c1- c2- c3- c4	
Practical Exam	a1- a2- a3- a4	b1- b2- b3- b4-b5	c1- c2- c3- c4	
Oral Exam	a1- a2- a3- - a4	b1- b2- b3- b4-b5		d1-d2-d3-d4-d5

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
Total	100%

7- List of references

Course specification of postgraduate

7.1. Notes and books

a. Department lecture book.

b. Illustrated practical notes of the Department.

7.2. Essential books:

- Lom, J. and Dykov L. I. (1992) Protozoan Parasites of Fish. Developments in Aquaculture and Fisheries Science, Vol. 26, Elsevier Science Publishers, Amsterdam
- Moravec, F. (1994) Parasitic Nematodes of Freshwater Fishes of Europe. Academia, Prague, 473 pp.
- Moravec, F. (1998) Nematodes of Freshwater Fishes of the Neotropical Region. Academia, Prague,464 pp.
- Hoffman, G.L. (1998). Parasites of North American Freshwater Fishes. Cornell University Press, Ithaca,New York.
- Kabata, Z. (2003). CopepodsParasitic on Fishes. Linnean Society London

Journals:

- http://www.parasitology.org
- www.koisite.be
- www.ars.usda edis.ifas.ufl.edu
- www.microscope-microscope.org
- www.aquaticparadise.com .gov.

http://edis.ifas.u .edu/pd les/FA/FA04100.pdf

Course Coordinators **Head of Department**

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
	Fish parasites		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Introduction of fish parasites	1st w-3rd w	1,2,3,4	1,2,3	1,2,3	1,2,3,4,5
2	Classification of fish parasites and its aquaria with reference to the significant species in Egypt.	4 th w-6 thw	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
3	Monogenea (in skin and gills) of fish (life cycle, and pathogenesis).	7 th w-10 thw	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
4	Digenea (in internal organs and muscles) of fish (life cycle, and pathogenesis).	11 th w -16 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
5	Cestodes affecting specific organs of fish (life cycle, and pathogenesis).	17 th w -20 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
6	Nematodes affecting different organs of fish (life cycle, and pathogenesis).	21 th w -22 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
7	Acanthocephala in different fish species (life cycle, and pathogenesis).	23 th w -25 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
8	Protozoa affecting different organs of fish (life cycle, and pathogenesis).	26 th w -29- th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
9	External arthropods affecting of fish (life cycle, and pathogenesis).	30 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
10	Different ways of treatment and control of fish parasites	31 th w -32 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
11	Specific zoonotic parasites affecting fish.	33 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5
12	Advanced and modern methods for modify the hygienic measurements during preparation of fish meal to overcome the	34 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5

Course specification

	parasitic diseases.					
13	Advanced techniques for diagnosis of fish parasites (Collection, handling, staining and preservation of infected samples). Write a report for the spread of certain diseases of fish based on the gained experience of identification.	35 th w -36 th w	1,2,3,4	1,2,3,4,5	1,2,3	1,2,3,4,5

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD 98**
Course title :	Snails and its veterinary importance
Program title:	
Contact hours/ week	Theoritical:1 Practical:2 Total:3
Approval Date	

2-Professional information

Overall aims of course:

1- Be aware the classification, morphology, role of molluscs (snails) as intermediate hosts.
2- Comprehend molluscs of veterinary importance in the local environment.
3- Develop different approaches to handle, collect and examine snails.
4- Illustrate molecular identification of parasitic infections in snails.
5- Utilize efficiently advanced methods in snails control.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1. Write classification, morphology of different snail with its role as intermediate host
a.2. Summarize different snail types and its importance in the local environment as fresh or brackish water or land snails.
a.3. Illustrate traditional and advanced methods of snail control.
a.4. Realize molecular identification of parasitic infections in snails.

b-Intellectual skills

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

b.1. Differentiate various snails and its importance in the local environment as fresh or brackish water or land snails.
b.2. Interpret family Lymnaeidae, family Physidae, family Planorbidae, family Viviparidae, *Zebrina* sp. & *Helicella*, *Prinella conica* in the local environment.
b.3. Correlate traditional and advanced methods of snail control.
b.4. Utilize molecular identification of parasitic infections in snails.

c- Professional and practical skills

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

c.1. Master the field trips for collection and examination molluscs.
c.2. Implement samples staining.
c.3. Evaluate preservation of samples for immediate or further examinations.
c.4. Write a report and a key for a particular snail.

d- General and transferable skills

Course specification of postgraduate

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

d.1. Work effectively in a team.
d.2. Utilize efficiently the library facilities, computer ,…
d.3. Own experience to public speaking and scientific reporting, presentation and discussion.
d.4. Manage identification and diagnostically approach to molluscs-caused disease conditions.
d.5. Utilize of internet to update the information in the field of veterinary and medical importance of mollusks

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week)	General introduction to molluscs (classification, morphology, its role as intermediate host traditional methods of control, a key for a particular snails. Collection, preservation, staining and examination of the fresh and preserved molluscs).	3	1	2
	Molluscs of veterinary importance in the local environment	12	3	9
	Freshwater snails types and importance in the local environment.	12	3	9
	Brackish water snails and importance in the local environment.	9	3	6
	Land snails types and importance in local environment	9	3	6
	Family Lymnaeidae, veterinary medical importance in the local environment.	6	2	4
	Family Physidae in the local environment.	9	3	6
	Family Planorbidae, in the local environment.	9	3	6
	Family Viviparidae; in the local environment.	9	3	6
	Zebrina sp. & *Helicella* in the local environment.	9	3	6
	Prinella conica; in the local environment.	6	2	4
	Advanced methods in snails control.	6	2	4
	Molecular identification of parasitic infections in snails.	6	2	4
	Snails collection and identifications in field trips.	3	1	2
	Total	108	34	74

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4- video movies for students of special needs.

Course specification of postgraduate

6-Student assessment

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
Written Exam	a1- a2- a3- a4	b1- b2- b3-b4	c1- c2- c3- c4	
Practical Exam	a1- a2- a3- a4	b1- b2- b3-- b4	c1- c2- c3- c4	
Oral Exam	a1- a2- a3- - a4	b1- b2- b3-- b4		d1-d2-d3- d4-d5

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
total	100%

7- List of references

7.1. Notes and books

a. Department lecture book.
b. Illustrated practical notes of the Department .

7.2. Essential books:

a- Helminths, Arthropods & Protozoa of domesticated Animals., E.J.L. Soulsby (1982).
b- Parasitology: the biology of animal parasites 5th.ed., Elmer. R. Nable., (1982).
c- Fresh water snails of Africa and their medical importance 2nd edition by Taylor & Francis (1994)
d- Textbook of Veterinary Parasitology, 5th ed., Norman.Dlevine.,1983

7.3. Recommended texts

Freshwater Snails of Africa and their medical importance ...CRC Press 2003

Journals:

Course specification of postgraduate

- Veterinary Parasitology
- Parasitology Research.

Websites:

www.ajtmh.org
www.sunsite.ualberta.ca/
http:/ www.applesnail.net/content/illustratio...

Course Coordinators **Head of Department**

Course specification

	Topics **Snails and its veterinary importance**	week	Intended learning outcomes of course (ILOs)			
			K and U (a)	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	General introduction to molluscs (classification, morphology, its role as intermediate host traditional methods of control, a key for a particular snails. Collection, preservation, staining and examination of the fresh and preserved molluscs).	**1** st w	1,2,3	1,2,3	1,2,3,4	1,2,3,4,5
2	Molluscs of veterinary importance in the local environment.	**2nd w- 5 thw**	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
3	Freshwater snails and importance in the local environment.	**6** th w-**9** th**w**	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
4	Brackish water snails and importance in the local environment.	**28**th w- **36**th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
5	Land snails and importance in the local environment.	**10** th w **-12** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
6	Family Lymnaeidae, veterinary medical importance in the local environment.	**13** th w **-15** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
7	Family Physidae in the local environment.	**16** th w **-17** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
8	Family Planorbidae, in local environment.	**18** th w **-20** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
9	Family Viviparidae; in local environment.	**21** st w **-23** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
10	*Zebrina* sp. & *Helicella* in the local environment.	**27** th w **-29** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5

Course specification

11	*Prinella conica*; in the local environment.	**30** th w **-31** st w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
12	Advanced methods in snails control.	**32** th w **-33** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
13	Molecular identification of parasitic infections in snails.	**34** th w **-35** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5
14	Snails collection and identifications in field trips.	**36** th w	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD-99**
Course title :	Immunoparasitology
Program title:	Doctorate of Philosophy
Contact hours/ week	1h lectures/ 2 h practical total 3h
Approval Date	

2-Professional information

Overall aims of course:

1. Understand the immunity dealing with selection of unique parasitic antigens and its analysis.
2. Study the structure of certain parasitic antigens and its modification of antigenicity.
3. Detect advanced markers of immunity.
4. Study the evaluation of vaccines used.
5. Highlights available vaccination programs and successful vaccination trials against specific parasites

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1- Familiarize the structure of certain parasitic antigens.
a.2- Comprehend available vaccination programs.
a.3- Realize modification of antigenicity of certain parasites and modification of host immune response against certain parasites.

b-Intellectual skills

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

b.1- Differentiate unique parasitic antigens and its analysis.
b.2- Interpret successful vaccination trials against specific parasites.
b.3- Utilize advanced markers of immunity.

c- Professional and practical skills

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

c.1- Use the up to date technology to handle and collection samples for advanced serological studies .
c.2- Utilize the up to date technology to do the different diagnostic techniques.
c.3- Master the preparation of recombinant and other antigens..
c.4- Implement findings of the different immunological tests .

d- General and transferable skills

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

d.1- Work effectively in a team and manage the time.
d.2- Gain experience in scientific reporting , presentation and discussion.
d.3- Efficient use of library facilities, computer skills, etc.
d.4. Identify and diagnostically approach to parasitic disease.

Course specification of postgraduate

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
1h lecture/ 2h practical per week.	Introduction and structure of certain parasitic antigens.	4.5	1.5	3
	Identification and collection samples for advanced serological studies.	13.5	4.5	9
	Selection of unique parasitic antigens and its analysis.	9	3	6
	Preparation of recombinant and other antigens.	13.5	4.5	9
	Detection of advanced markers of immunity.	6	2	4
	Modification of antigenicity of certain parasites.	9	3	6
	Modification of host immune response against certain parasites.	9	3	6
	Recognition of available vaccination programs.	15	5	10
	Successful vaccination trials against specific parasites.	15	5	10
	How to evaluate vaccines used.	9	3	6
	Practical works (up to date technology to handle samples and do the different diagnostic techniques and Interpret findings of the different immunological tests)	4.5	1.5	3
	Total	108	36	72

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4- video movies for student of special need

6-Student assessment

6.1. Assessments methods

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
Written Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3-c4	
Practical Exam	a1	b1- b2- b3-	c1- c2- c3-c4	d2-d3-d4
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3-c4	d1-d2-d3-d4

Course specification of postgraduate

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
total	100%

7- List of references

7.1. Notes and books

a. Department lecture book.
b. Illustrated practical notes of the department**.**

7.2. Essential books:

a- Helminths, Arthropods & Protozoa of Domesticated Animals., E.J.L. Soulsby (1982).
b- Parasitology: the biology of animal parasites 5th ed., Elmer. R. Nable., 1982
c- Immunity to parasites (how animals control parasite infections.), Derek.Wakelin.1984.
d- The immunology of host ectoparasitic arthropod relationships, Stephen. K. Wilkel, 1996.

7.3. Recommended texts

a) Application of immunological methods. (Vol. 1, 2, 3) D. M. Weir.
b) Immunological techniques (Laboratory Manual), John Goers.

7.4. Journals, Websites ……..etc

Journals:

Parasitology Research.
Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

http://www.journals.elsevier.com/veterinary-parasitology/
http://www.parasitology.org

Websites:

WWW.Science direct
WWW. Pubmed.com
WWW.Scholar google.com
WWW.welly interscience

Course Coordinators **Head of Department**

Course specification of postgraduate

Beni Suef University
Faculty of Veterinary Medicine

Course specification

	Topics	Week	Intended learning outcomes of course (ILOs)			
	Immunoparasitology		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Introduction and structure of certain parasitic antigens.	1-2	1,2,3	1,2,3	1,2,3,4	1,2,3,4
2	Identification and collection samples for advanced serological studies.	3-8		1,3	1,2,3,4	1, 3,4
3	Selection of unique parasitic antigens and its analysis.	9-12	1, 3	1	1,2,3,4	1, 3
4	Preparation of recombinant and other antigens.	13-15	1, 3	1	1,2,3	1, 3
5	Detection of advanced markers of immunity.	16-17	1,2,3	1,2,3	1,2,3,4	1,2,3,4
6	Modification of antigenicity of certain parasites.	18-20	1, 3	1, 3	1,2,3	1 ,3
7	Modification of host immune response against certain parasites.	21-23	1, 3	1 ,3	1,2,3,4	1, 3
8	Recognition of available vaccination programs.	24-28	1,2,3	1,2,3	1,2,3,4	1,2,3,4
9	Successful vaccination trials against specific parasites.	29-33	2,3	1,2,3	1,2,3,4	1,2,3,4
10	How to evaluate vaccines used.	34-35	2	1,2	4	1,2,3,4
11	Practical works (up to date technology to handle samples and do the different diagnostic techniques and Interpret findings of the different immunological tests)	36	1,2,3	1,2,3	1,2,3,4	1,2,3,4

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD-100**
Course title :	Clinical Parasitology
Program title:	Doctorate of Philosophy
Contact hours/ week	1h theoretical /2h practical Total 3
Approval Date	

2- Professional information

Overall aims of course:

1.Understand the introduction for clinical Parasitology.

2. Utilize the appropriate use of modern techniques and applications to diagnose parasite infections in different hosts.

3. Interpret traditional techniques for fecal, blood and external parasites examination.

4. Master molecular methods for parasites diagnosis and identification.

5. Apply advanced techniques of serological diagnosis.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a.1. Comprehend traditional techniques for fecal, blood and external parasites examination.

a.2. Summarize molecular methods for parasites diagnosis and identification.

a.3. Realize advanced techniques of serological diagnosis.

a.4. Select molecular techniques for identification of helminths and enteric protozoa

b-Intellectual skills

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

b.1- Differentiate between traditional techniques for fecal, blood and external parasites examination.

b.2- Interpret molecular techniques for identification of helminths and enteric protozoa.

b.3- Realize samples collection and transportation.

b.4- Comprehend advanced techniques of serological diagnosis.

c- Professional and practical skills

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

c.1- Manage handling samples from blood and feces as well as its preservation.

c.2- Utilize traditional techniques for fecal, blood and external parasites examination.

c.3- Master molecular techniques for identification of helminths and enteric protozoa.

c.4- Perform advanced techniques of serological diagnosis.

c.5- Write a scientific paper.

d- General and transferable skills

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

d.1- Work effectively in a team and manage the time.

d.2- Gain experience in scientific reporting , presentation and discussion.

d.3- Efficient use of library facilities, computer skills, etc.

d.4. Identify and diagnostically approach to parasitic diseases.

4-Topics and contents

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week)	Introduction for clinical Parasitology.	**3**	**1**	**2**
	Fecal examination: Samples collection and transportation. Traditional techniques for examination. Molecular methods for parasites diagnosis and identification. Molecular identification of helminths and enteric protozoa.	**27**	**9**	**18**
	Blood examination: Traditional techniques for diagnosis of blood parasites. Serological diagnosis. Molecular diagnosis.	**30**	**10**	**20**
	External parasites: Samples collection of different external parasites. Traditional techniques of diagnosis. Molecular techniques for diagnosis and identification.	**30**	**10**	**20**
	Experimental design and molecular techniques.	**3**	**1**	**2**
	Total	**108**	**36**	**72**

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4. Video movies for students of special needs.

6-Student assessment

6.1. Assessments methods

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
written Exam	a1- a2- a3-a4	b1- b2- b3-b4	c1- c2- c3- c4- c5	
Practical Exam	a1- a2- a3- a4	b1- b2- b3-b4	c1- c2- c3- c4- c5	
Oral Exam	a1- a2- a3- a4	b1- b2- b3-b4		d1-d2-d3-d4

6.2. Assessment schedules

Course specification of postgraduate

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
Total	100%

7- List of references

7.1. Notes and books

a. Department lecture book.
b. Illustrated practical notes of the department**.**

7.2. Essential books:

a- Helminths, Arthropods & Protozoa of Domesticated Animals., E.J.L. Soulsby (1982).
b- Parasitology: the biology of animal parasites 5th ed., Elmer. R. Nable., 1982
c- Immunity to parasites (how animals control parasite infections.), Derek.Wakelin.1984.
d- The immunology of host ectoparasitic arthropod relationships, Stephen. K. Wilkel, 1996.

7.3. Recommended texts

a) Application of immunological methods. (Vol. 1, 2, 3) D. M. Weir.
b) Immunological techniques (Laboratory Manual), John Goers.

7.4. Journals, Websites ……..**etc**

Journals:

Parasitology Research.
Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

http://www.journals.elsevier.com/veterinary-parasitology/
WWW.Science direct
WWW. Pubmed.com
WWW.Scholar google.com
WWW.welly interscience

Course Coordinators **Head of Department**

Course specification of postgraduate

Course specification

	Topics	Week	Intended learning outcomes of course (ILOs)			
	Clinical parasitology		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Introduction for clinical Parasitology.	1	1,2,3,4	1,2,3,4	1,2,3,4,5	1,2,3,4
2	**Fecal examination:** Samples collection and transportation. Traditional techniques for examination. Molecular methods for parasites diagnosis and identification. Molecular identification of helminths and enteric protozoa.	2-10	1,2,3,4	1,3,4	1,2,3,4,5	1,2,3,4
3	**Blood examination:** Traditional techniques for diagnosis of blood parasites. Serological diagnosis. Molecular diagnosis.	11-20	1,2,3,4,4	1,2,3,4	1,2,3,4,5	1,2,3,4
4	**External parasites:** Samples collection of different external parasites. Traditional techniques of diagnosis. Molecular techniques for diagnosis and identification.	21-30	1,2,3,4	1,2,3,4	1,2,3,4,5	1,2,3,4
5	Experimental design and molecular techniques	31-36	1,2,3,4	1,2,3,4	1,2,3,4,5	1,2,3,4

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD-101**
Course title :	Parasites of Wild Animals
Program title:	
Contact hours/ week	2hrs/ practical 1hr/ theoretical total 3hrs
Approval Date	

2-Professional information

Overall aims of course:

1- Master the skills and management of scientific research.
2- Integrate the specialized and related knowledge to handle, collect, preserves and prepare diagnostic laboratory samples.
3- Understanding the nature, types and importance of specific parasitic species as an invertebrate, pathogenic to wild animals.
4- Be aware about morphological description of specific helminths, arthropods and protozoa of Egyptian & imported wild animals and their life cycle.
5- Work continuously for increasing knowledge in application of diagnostic techniques and their applications to Egyptian & imported wild animals and at captivity or free in conservation areas.
6- Master bases of control of specific helminths, arthropods and protozoa of Egyptian & imported wild animals and their life cycle.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

By the end of the PhD program, the postgraduate should be able to:

a.1. Recognize nature, types, classification and importance of parasites in Egyptian & imported wild animals species.
a.2. Summarize morphological characters specific helminths , arthropods and protozoa of Egyptian & imported wild animals.
a.3. Realize the life cycle of specific helminths , arthropods and protozoa of Egyptian & imported wild animals and their pathogenesis.
a.4. Comprehend lines for control of wild animal parasites.
a.5. Familiarize advanced diagnostic assays.

b-Intellectual skills

By the end of the PhD program, the postgraduate should be able to:

b.1. Compare morphologically between specific helminths of Egyptian & imported wild animals.
b.2. Differentiate morphologically between specific arthropods and protozoa of Egyptian & imported wild animals.

b.3 Interpret pathogenesis, life cycle of specific helminths, arthropods and protozoa of

Course specification of postgraduate

Egyptian & imported wild animals.
b.4. Utilize lines for control of wild animal parasites.
b.5. Interpretation of the results and differential diagnosis.

C- Professional and practical skills

By the end of the PhD program, the postgraduate should be able to:

C.1. Perform masterly the recent veterinary professional practice in collection of samples for different parasitological diagnostic purposes.
C.2. Implement samples staining and preservation for immediate or further examination.00
C.3. Write the veterinary professional reports and scientific paper.
C.4. Manage the available and required material, tools and equipment in veterinary research projects.
C.5. Master differential diagnosis of specific helminths, arthropods and protozoa of Egyptian & imported wild animals.

d- General and transferable skills

By the end of the PhD program, the postgraduate should be able to:

d.1. Communicate effectively and utilize of information technology in the development of veterinary professional practice.
d.2. Utilize different available resources for efficient obtaining of knowledge and information.
d.3. Own self-evaluation and discipline with continuous learning.
d.4. Work in research group and lead a team work in different veterinary professional fields.
d.5. Identify and diagnostically approach to parasite-borne disease conditions.

4-Topics and contents

Topic	Week	No. of hours	Lectures	Practical
Introduction to wild animal parasites and its zoonotic importance (nature, types, classification and importance of parasitic Egyptian & imported wild animals species.	1	3	1	2
Specific helminths of Egyptian & imported wild animals (morphology, life cycle, pathogenesis).	2- 10	27	9	18
Specific arthropods and protozoa of Egyptian & imported wild animals (Morphology, life cycle, pathogenesis).	11- 20	30	10	20
Advanced diagnostic assays (samples collection, staining, preservation for different parasitological diagnostic purposes, the available and required material, tools and equipment in veterinary research projects, differential diagnosis and write a report and scientific paper).	21- 30	30	10	20
Lines for control of wild animal parasites	31- 36	18	6	12
Total		**108**	**36**	**72**

5-Teaching and learning methods

Course specification of postgraduate

5.1- Lectures (brain storm, discussion) using board, data shows.
5.2- Self learning by preparing essays and presentations (computer researches and library).
5.3- Practical (models, samples of stained tissues and data show).
5.4-video movies for students of special needs.

6-Student assessment

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Written Exam	a1- a2- a3 –a4	b1- b2- b3- b4- b5	c1- c2- c3- c4	
Practical Exam	a1- a2- a3- a4	b1- b2- b3	c1- c2- c3- c4	
Oral Exam	a1- a2- a3- a4- a5	b1- b2- b3- b4 – b5	c1- c2- c3- c4- c5	d1-d2-d3- d4

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	**50%**
Practical exam	**25%**
Oral exam	**25%**
total	**100%**

7- List of references

7.1. Notes and books

a. Department lecture book.
b. Illustrated practical notes of the department**.**

7.2. Essential books:

a- Helminths, Arthropods & Protozoa of domesticated Animals, E.J.L. Soulsby (1982).
b- Parasitology: the biology of animal parasites 5th ed., Elmer. R. Nable., 1982
c- Veterinary Parasitology 2th ed., G.M. Marqubart, 1995.
d- Manual of General Veterinary Parasitology, Sschaudhri, 2003.

Course specification of postgraduate

e- Diagnostic Veterinary Parasitology 2th ed. Charlesm Hendrix, 1998.
f- General Veterinary Parasitology. P.C.Jain., 2002.
g- Veterinary Clinical Parasitology.7th ed. Anne M. Gary.A.2006

Journals:

- Parasitology Research.
- Veterinary Parasitology.

Websites:

WWW.Science direct
WWW. Pubmed.com
WWW.Scholar google.com
WWW.welly interscience

Course Coordinators **Head of Department**

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
	Parasites of Wild Animals		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Introduction to wild animal parasites and its zoonotic importance (nature, types, classification and importance of parasitic Egyptian & imported wild animals species.	1st w	1,2,3	2,4,5	1,2,3,4	1,2,3,4
2	Specific helminths of Egyptian & imported wild animals (Morphology, life cycle, pathogenesis).	2h w- 10thw	2,3,4,5	2,3,4	1,2,3,4	1,2,3,4
3	Specific arthropods and protozoa of Egyptian & imported wild animals (Morphology, life cycle, pathogenesis).	11th w- 20th w	1,2,3,4	2,3,4	1,2,3,4	1,2,3,4
4	Advanced diagnostic assays (samples collection, staining, preservation for different parasitological diagnostic purposes. the available and required material, tools and equipment in veterinary research projects, differential diagnosis and write a report and scientific paper).	21th w- 30th w	4,5	1,3,4	1,2,3,4	1,2,3,4
5	Lines for control of wild animal parasites.	31-36 w	1,2,3	2,4,5	1,2,3,4	1,2,3,4

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	**PhD-102**
Course title :	Farm Animals Parasites
Program title:	Ph.D
Contact hours/ week	2hrs/ practical 2hrs/ theoretical total 4hrs
Approval Date	

2-Professional information

Overall aims of course:

1- Familiarize pathobiology of specific parasite affecting different farm animal species.
2- Interpret the immunity against specific parasite affecting different farm animal species
3- Manage the advanced diagnostic techniques to diagnose parasitic infections in farm animals**.**
4- Detect and solve the veterinary and environmental problems based on scientific and research evidence.
5- Be aware about morphometrical description of parasitic species and their different biological styles.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

By the end of the PhD program, the postgraduate should be able to:

a.1. Describe efficiently classification and morphometry of parasitic species affecting different farm animals.
a.2 Summarize the pathobiology of specific parasitic species affecting different farm animals.
a.3. Realize the immunity against specific parasitic species affecting different farm animals.
a.4. Comprehend different control measures of specific parasitic species affecting different farm animals.
a.5. Illustrate advanced diagnostic techniques to diagnose parasitic infections in farm animals.

b-Intellectual skills

By the end of the PhD program, the postgraduate should be able to:

b.1. Differentiate morphometry of parasitic species affecting farm animals.
b.2. Interpret the pathobiology of specific parasitic species affecting different farm animals.
b.3. Analyze immunity against parasitic infections in farm animals.
b.4. Adapt different control measures against parasitic infections in farm animals.
b.5. Utilize advanced diagnostic techniques to diagnose parasitic infections in farm animals.

C- Professional and practical skills

Course specification of postgraduate

By the end of the PhD program, the postgraduate should be able to:

C.1. Control handling, collection, reservation and staining of samples to diagnose parasitic infections in farm animals.
C.2. Write and evaluate the veterinary professional reports.
C.3. Use the available and required material, tools and equipment in veterinary research projects.
C.4. Master advanced diagnostic techniques to diagnose parasitic infections in farm animals.
C.5. Write the veterinary professional scientific paper.

d- General and transferable skills
By the end of the PhD program, the postgraduate should be able to:

d.1. Communicate effectively and utilize of information technology in the development of veterinary professional practice.
d.2. Utilize different available resources for efficient obtaining of knowledge and information.
d.3. Own self-evaluation and discipline with continuous learning.
d.4. Work in research group and lead a team work in different veterinary professional and research practice.

4-Topics and contents

Topic	Week	No. of hours	Lectures	Practical
Introduction to parasites of farm animal (classification, morphometrical description).	1-2	16	8	8
Specific parasites affecting small animals (sheep & goats). Pathobiology, immunity, diagnosis and control.	3-6	16	8	8
Specific parasites affecting large animals (cattle & buffaloes). Pathobiology, immunity, diagnosis and control.	7-15	36	18	18
Specific parasite affecting of equines, pathobiology, immunity, diagnosis and control.	16-18	18	9	9
Advanced diagnostic techniques to diagnose parasitic infections in farm animals (handling, collection, reservation and staining of samples, write a report and scientific paper and available and required material, tools and equipment in veterinary research projects).	19-36	56	28	28

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows
5.2- Self learning by preparing essays and presentations (computer researches and library)
5.3- Practical (models, samples of stained tissues and data show).
5.4- Video movies for student of special need.

6-Student assessment

Course specification of postgraduate

6.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Written Exam	a1- a2- a3 –a4-a5	b1- b2- b3- b4- b5	c1- c2- c3- c4- c5	
Practical Exam	a1- a2- a3- a4	b1- b2- b3	c1- c2- c3- c4- c5	
Oral Exam	a1- a2- a3- a5	b1- b2- b3- b4 – b5	c1- c2- c3- c4- c5	d1-d2-d3- d4

6.2. Assessment schedules

Method	Week(s)
Written exam	Managed by department administration
Practical exam	Managed by faculty administration
Oral exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
Oral exam	25%
Total	100%

7- List of references

7.1. Notes and books

a. Department lecture book.

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b- Parasitology: the biology of animal parasites 5th ed., Elmer. R. Nable., 1982
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d- Manual of General Veterinary Parasitology, Sschaudhri, 2003.
e- Diagnostic Veterinary Parasitology 2th ed. Charlesm Hendrix, 1998.
f- General Veterinary Parasitology. P.C.Jain., 2002.
g- Veterinary Clinical Parasitology.7th ed. Anne M. Gary.A.2006

Journals:

- Parasitology Research.
- Veterinary Parasitology.

Course specification of postgraduate

Websites:

WWW.Science direct
WWW. Pubmed.com
WWW.Scholar google.com
WWW.welly interscience

Course Coordinators **Head of Department**

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
	Farm Animals Parasites		**K and U (a)**	**I.S (b)**	**P. P.S. (c)**	**G.T.S (d)**
1	Introduction to parasites of farm animal (classification, morphometrical description).	1st w- 2nd w	1,2	2,4	1,2,3,5	1,2,3,4
2	Specific parasites affecting small animals (sheep & goats). Pathobiology, immunity, diagnosis and control.	3th w- 6th w	3,4,5	1,2,3,4,5	1,2,3,4	1,2,3,4
3	Specific parasites affecting large animals (cattle & buffaloes). Pathobiology, immunity, diagnosis and control.	7th w- 15th w	3,4,5	1,2,3,4,5	1,2,3,4	1,2,3,4
4	Specific parasite affecting of equines. Pathobiology, immunity, diagnosis and control.	16th w- 18th w	3,4,5	1,2,3,4,5	1,2,3,4	1,2,3,4
5	Advanced diagnostic techniques to diagnose parasitic infections in farm animals (handling, collection, reservation and staining of samples, write a report and scientific paper and available and required material, tools and equipment in veterinary research projects).	19th w- 36th w	4,5	3,4	1,2,3,4	1,2,3,4