Beni suef university
Faculty of veterinary medicine

Diploma PROGRAMME SPECIFICATIONS

Programme Specification
University: Beni Suef university
Faculty: Faculty of veterinary medicine

A- Administrative Information

1. Programme title Diploma of Applied Parasitology
2. Award/degree: (Diploma of Vet. Med. Sciences)
3. Department responsible: Parasitology
4. Coordinator: Waleed Arafa
5. External evaluator(s)
6. Date of most recent approval of programme specification by the Faculty Council:

B- Professional Information

1. Programme aims: The Diploma programme support the postgraduate student ability to:

1- Define helminths, arthropods, protozoa infecting mammals and birds.
2- Diagnose helminths, arthropods, protozoa of veterinary medical importance.
3- Describe life cycle of helminths, arthropods, protozoa of veterinary medical importance.
4- Differentiate between the different parasitic affection.
5- Understand role of the immune system in the defense against the parasitic diseases.
6- Identify the pathological features associated with the different parasitic affections.
7- Apply the different control measures.

2. Intended learning outcomes (ILOs) for programme

a- Knowledge and understanding:

By the end of the Diploma program, the postgraduate must be able to:

a1- Define the different parasites of veterinary medical importance.

a2- State the biology of different parasites of veterinary importance.

a3- Define the different components of the immune system which involved in the parasitic infection.

A4- Outline the pathological features of different parasitic affection.

A5- Estimate the different control methods for the different parasites.

b- Intellectual skills

By the end of the Diploma program, the postgraduate must be able to:

b1- Identify the different parasites of veterinary importance.

b2-Describe biology of different parasites of veterinary importance and their pathogenesis.

b3- identify type of the immune response against the different parasites

b4- Describe the pathology of the different parasites.

b5- Discuss the different strategic plane and the most suitable ones

c- Professional and practical skills

By the end of the Diploma program, the postgraduate must be able to:

C1. Demonstrate the different parasites of veterinary importance

C2- illustrate the infection and diagnostic stages of parasite of veterinary importance
C3- illustrate role of the immune system in the defense against parasites.
C4-demonstrate the pathological picture of the parasitic affection
C5 –apply the different control programs for parasitic affections.

d- General and transferable skills

By the end of the Diploma program, the postgraduate must be able to:
d1- Work in a group and manage time.
d2- Exhibits the sense of beauty and neatness.
d3- Do internet based search.

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 (February 2009) Diploma 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, BeniSuef University, BeniSuef, Egypt are selected to confirm the appropriateness of the academic standards .

4 – Curriculum structure and content.

5.1) Programme duration: 1years
5.2) Programme structure:

Title	Lecture	Practical	Total
1. Helminthology	2	2	**4**
2- immunoparasitology	1	1	**2**
3- Veterinary Entomology	1	1	**2**
4- Protozoology	1	1	**2**
5- Pathology of parasitic diseases	1	2	**3**
6- Hygiene and zoonotic diseases	1	2	**3**
Total	7	9	**16**

5- Programme – course ILOS Matrix

Title	a1	a2	a3	a4	a5	b1	b2	b3	b4	b5	c1	c2	c3	c4	c5	d1	d2	d3	d4	d5
1-	x	x	x			x	x	x			x	x	x			x	x	x		
2-	x	x	x			x	x	x			x	x	x			x	x	x		
3-	x	x	x			x	x	x			x	x	x			x	x	x		
4-	x	x	x			x	x	x			x	x	x			x	x	x		
5-				x					x					x					x	
6-					x					x					x					x

6- Programme admission requirements:

1- Obtaining a bachelor degree in veterinary medicine sciences from one of the Egyptian universities or equivalent degree from another recognized scientific institute with any grade
2- The bachelor degree must be obtained at least one year prior to registration.
3- The applicant must have regular attendance in his courses according to the schedule of the faculty.
4- Registration will be during September of each year.

7 - Regulations for progression and programme completion.

1- Registration period is one year for diploma and the applicant not exceed a period of registration for two year.
2- The examinations of the diploma are 2 times / year in December & April.
3- The faculty council has the right to deprive the applicant from the exam if his attendance courses are less than 75%.
4- In case of failure, the exams will be hold 2 times / year and re-examination in all courses each time.

8-System of examination for postgraduate studies as follow:

 Time of written exams, 3 hours for each curriculum have 3 hours or more for theoretical / practical hours/ week. If the curriculum less than 3 hours / week, the time of ex. is 2 hours only.

 The final degree of each curriculum which have 3 hours (theoretical & practical) per week is 100 & less than 3 hours 50 degree & divided into 50 % for written ex. and 50 % for practicle and oral ex.

9-Grades of graduation are as follow:

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

The programme specification should have attached to it all course specifications listed in the matrix.

Programme coordinator:
Name.Waleed Mahmoud Arafa
Signature..... Date

Head of the Department ……..
Name: ……
Signature..... Date ,

Beni suef university
Faculty of veterinary medicine

Program aims – ILOS Matrix for the Diploma program

مصفوفة اهداف البرنامج مع مخرجات التعلم المستهدفة

Program ILOs / Program ILOS		Program aims						
		a- Define helminths, arthropods, protozoa infecting mammals and birds.	b- Diagnose helminths, arthropods, protozoa of veterinary medical importance.	c- Describe life cycle of helminths, arthropods, protozoa of veterinary medical importance	d- Differentiate between the different parasitic affection.	e- Understand role of the immune system in the defense against the parasitic diseases	f- Identify the pathological features associated with the different parasitic affections	g- Apply the different control measures
Knowledge and understanding	a.1- Define the different parasites of veterinary medical importance	√						
	a2- State the biology of helminthes, arthropods, and protozoa of veterinary importance			√	√			
	a3- Define the different components of the immune system which involved in the parasitic infection					√		
	a4- Outline the pathological features of different parasitic affection						√	
	a5- Estimate the different control methods for the different parasites							√
Intellectual skills	b1) Identify the morphological features of helminthes, arthropods, and protozoa of parasites of veterinary importance	√						
	b2) Describe biology of the different parasites of			√	√			

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Program ILOs / Program ILOS		Program aims						
		a- Define helminths, arthropods, protozoa infecting mammals and birds.	b- Diagnose helminths, arthropods, protozoa of veterinary medical importance.	c- Describe life cycle of helminths, arthropods, protozoa of veterinary medical importance	d- Differentiate between the different parasitic affection.	e- Understand role of the immune system in the defense against the parasitic diseases	f- Identify the pathological features associated with the different parasitic affections	g- Apply the different control measures
	veterinary importance and their pathogenesis							
	b3) identify type of the immune response against the different parasites					√		
	b4) Describe the pathology of helminthes, arthropods, and protozoa.							√
	b5 Discuss the different strategic plane and the most suitable ones							√
Practical and professional skills	c1- Demonstrate the different helminthes, arthropods, and protozoa of veterinary importance	√						
	c2- Illustrate the infection and diagnostic stages of parasite of veterinary importance.		√		√			
	c3- Illustrate the role of the immune system in the defense against parasites.					√		
	c4- Demonstrate the pathological picture of the parasitic affection						√	
General and	d1- Work in a group and manage time.	√		√	√			
	d2- Exhibits the sense of beauty and neatness.	√		√	√		√	

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Program ILOs / Program ILOS		Program aims						
		a- Define helminths, arthropods, protozoa infecting mammals and birds.	b- Diagnose helminths, arthropods, protozoa of veterinary medical importance.	c- Describe life cycle of helminths, arthropods, protozoa of veterinary medical importance	d- Differentiate between the different parasitic affection.	e- Understand role of the immune system in the defense against the parasitic diseases	f- Identify the pathological features associated with the different parasitic affections	g- Apply the different control measures
transferable skills	d3- Do internet based search.	√	√	√	√	√		√

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Deploma matrix (ARS with program ILOS

Academic standers		Knowledge and understanding						Intellectual skills					Professional and practical skills		General and transferable skills						
Program ILOs		**a1**	a2	**a 3**	**a 4**	**a 5**	**a6**	**b1**	**b 2**	**b 3**	**b4**	**b 5**	**c1**	**c2**	**d1**	**d 2**	**d3**	**d4**	**d5**	**d 6**	**d7**
Knowledge and understanding	a1	√																			
	a2	√																			
	a3			√																	
	a4	√																			
	a5				√																
Intellectual skills	b1							√													
	b2										√										
	b3									√											
	b4									√											
	b5								√			√									
Professional and practical skills	c1												√								
	c2													√							
	c3													√							
	c4												√								
	c5												√								
General and transferable skills	**d1**														√				√	√	
	d2																				
	d3															√		√			

Beni suef university
Faculty of veterinary medicine

Beni-Suef University
Faculty of Veterinary Medicine
Parasitology department.

Course specification of postgraduate

1-Basic information

Course Code:	
Course title :	Immunoparasitology
Program title:	Diploma of Applied Parasitology
Contact hours/week	1h theoretical and 1h practical.
Approval Date	

2-Professional information

Overall aims of course:

This course aims to:

-Understand role of the immune response in the defense against the parasitic diseases.

-Study the modification of parasite antigenicity, and host immune responsiveness

-Summarize the requirement of immunogenicity for different parasitic antigens.

-Recognize general immunity to protozoa, helminthes and arthropodes.

-Understand clinical manifestations of acquired immunity..

- Demonstrate the immune evasion of 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- Summarize immune response against different parasites

a.2- Describe requirements for immunogeniciy.

a.3- Recognize clinical manifestations of acquired immunity.

a.4- Illustrate general immunity to protozoa, helminths and arthropods.

b-Intellectual skills

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

b.1- Differentiate immune evasion.

b.2- Differentiate the host antibodies and its types and functions against parasites.

b.3- Correlate modification of parasite antigenicity.

b.4- interpret modification of host immune responsive

C- Professional and practical skills

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

c.1- manage samples for antigenic nature.

c.2- obtain and prepare blood samples.

c.3- write report about serological diagnosis.

d- General and transferable skills

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

d.1- Work in a group with a determined timetable.

Course specification of postgraduate

d.2- Exhibits the sense of beauty and neatness.
d.3- Do internet-based search.

4-Topics and contents

Course weeks	Topic	No. of hours	Lectures	Practical
1-2	General introduction of immunology against parasites	4	2	2
3-8	Requirement of immunogenicity for different parasitic antigens	12	6	6
9-12	Immune response against different parasites (antibodies and its types and functions).	8	4	4
13-15	Clinical manifestations of acquired immunity.	6	3	3
16-17	Definition of immune evasion.	4	2	2
18-20	Modification of parasite antigenicity.	6	3	3
21-23	Modification of host immune responsive.	6	3	3
24-28	General immunity to protozoa.	10	5	5
29-33	General immunity to helminths.	10	5	5
34-35	General immunity to arthropods.	4	2	2
36	Practical works.(samples for antigenic nature, prepare blood samples and serological diagnosis)	2		2
Total		72	36	36

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 faculty library).
5.3- Practical (models, samples of……..).
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

Course specification of postgraduate

written Exam	a1, a2, a3, a4	b1, b2,b3, b4,	-	-
Practical Exam	-	-	c1, c2, c3	d1, d2, d3
Oral Exam	a1, a2, a3, a4	b1, b2,b3, b4,	-	-

6.2. Assessment schedules

Method	**Week(s)**
Practical exams	Managed by department administration
written exams	Managed by faculty administration
Oral Exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Practical exams	25%
written exams	50%
Oral Exam	25%
total	100%

7- List of references

7.1. Notes and books

7.2. Essential books:

a) Veterinary Immunology. Tizard.
b) Immunology of Parasitic infections: Cohen.
c) Immunology, Ivan Roitt.
d) Immunology, D. M. Weir.

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

Course Coordinators **Head of Department**

Beni-Suef University
Faculty of Veterinary Medicine
Parasitology department.

Course specification of postgraduate

Course specification

	Topics	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 of immunology against parasites	1-2	1,2,3,4	1,2,3,4	1,2,3	1,2,3
2	Requirement of immunogenicity for different parasitic antigens	3-8	2	3,4	1	1,2,3
3	Immune response against different parasites (antibodies and its types and functions).	9-12	1, 3	2,4		1,2,3
4	Clinical manifestations of acquired immunity.	13-15	1,3,4	2,4,	3	1,2,3
5	Definition of immune evasion.	16-17		1		1,2,3
6	Modification of parasite antigenicity.	18-20		3	1,3	1,2,3
7	Modification of host immune responsive.	21-23	1,2,4	2,4,	1,2,3	1,3
8	General immunity to protozoa.	24-28	1,2,3,4	1,3,4	1,2,3	1,
9	General immunity to helminths.	29-33	1,2,3,4	1,2,3,4	1,2,3	1
10	General immunity to arthropods.	34-35	1,3,4	1,2,3,4	1,2,3	1
11	Practical works.(samples for antigenic nature, prepare blood samples and serological diagnosis)	36			1,2,3	1,2,3

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	D15-D
Course title :	**Animal Hygiene and Zoonoses diseases**
Program title:	Diploma of Vet. Med. Sciences (applied parasitology)
Contact hours/ week	3 hours /week, (Lect.1h/week; Pract. 2h./week)
Approval Date	

2-Professional information

Overall aims of course:

This course aims to:

1- Identify environment, ecology, ecosystem and Ecological studies, the interaction between environment and parasitic diseases, Principles of prevention and control of parasitic diseases affecting livestock
2- Analyze different samples from animals and their surrounding environment
3- Solving a problem related to parasitic infestation in livestock farms
4- Create a plan for control of external parasites in livestock farms
5- Understanding the role of animals in transmitting zoonotic parasitic diseases to man.
6- Understanding the role of veterinarian in prevention of parasitic diseases in livestock farms

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a1. List the external and internal parasites affecting animals.
a2. Describe the risk factors that increase parasitic infestation
a3. List the effect of climatic factors on parasitic infestation
a4. Recall the general hygienic measures for prevention of parasitic diseases
a5. Recognize methods of application of disinfectants and insecticides
a6. Recall the integrated methods for control of parasitic diseases
a7. Outline the consequences of poor hygiene on spreading of parasitic diseases of zoonotic importance.

b- Intellectual skills

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

b1. Interpret hygienic measures in livestock farms in relation to parasitic diseases
b2 .Collect and analyze different environmental samples for parasitic infestation
b3. Differentiate between the roles of each environmental factor in parasitic infestation
b4. Evaluate the role of housing systems in spreading of parasitic diseases.
b5. Differentiate the level of parasitic infestation in different animal species in relation to soil types and managerial practices.
b6. Interpret the various modes of transmission of parasitic disease to man.
b7. Interpret the measures applied for prevention and control of parasitic infestation
b8. Differentiate between control programs for external and internal parasites importance

C- Professional and practical skills

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

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

c1. Measure and monitor the microclimatic and environmental factors affecting parasitic infestation.
c2. Reconstruct farms animals and farms to minimize risk of parasitic infestation.
c3. Measure the extent of parasitic infestation in critical areas in livestock farms such as calving boxes, calf barn.
c3. Apply a well-defined picture of zoonotic feature of different parasitic infection in animals.
c4. Apply a new technology for hygienic disposal and treatment of animal wastes.
c5. Carry an out epidemiological investigation for parasitic infestation in livestock farms.
c6. Plan an integrated program for prevention control of external parasites.

d- General and transferable skills

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

d1. Demonstrate and solving environmental problem increase risk of parasitic infestation.
d2. Utilize group working in parasitic diseases prevention and control.
d3. Able to communicate with specialists.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
Corse Title: **Animal hygiene and zoonoses diseases** **Lect.1 h./week, Pract. 2h./week)** **(Lec. h./week, Pract h./week)**	**Introduction**	1	1	-
	Environmental Hygiene	9	3	6
	Environment and parasitic diseases	4	2	2
	Systems of animal housing	3	3	-
	Internal parasites of animals	5	1	4
	External parasites of animals	8	2	6
	Hygienic disposal of animal wastes	5	1	4
	Pesticides	5	1	4
	Control internal parasites	8	2	6
	Control external parasites	6	2	4
	Student activities: - Animal and poultry farms visits - Writing assays - Internet search			
	Total	54	18	36

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Course specification of postgraduate

Course	Topic	No. of hours	Lectures	Practical
(Lec. h./week, Pract h./week) Corse Title: **Animal hygiene and zoonoses diseases** **Lect.1 h./week, Pract. 2h./week)**	**Introduction**	2	1	-
	Epidemiology of parasitic zoonoses	9	2	4
	Protozoan zoonoses	8	3	6
	Cestode zoonoses	4	1	6
	Trematode zoonoses	8	3	4
	Arthropode zoonoses	5	2	6
	Nematode zoonoses	6	3	6
	Diagnosis of parasitic zoonoses	4	1	4
	Guidelines in control of parasitic zoonoses	8	2	-
	Student activities: - Animal and poultry farms visits - Writing assays - Internet search			
	Total	54	18	36

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 faculty library)

5.3- Practical (models, Collection and analysis of environmental samples for detection of air impurities, chemical and microbiological examination of water and soil. dealing with animal wastes in animal and poultry farms.

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
written Exam	a1to a7.	b1-b3- b4-b7.	c6	d1
Practical Exam	a5,a7.	b2,b5,b6, b7.	c1 to c6.	d2,3
Oral Exam	a1to a7.	b1-b3- b4-b7.	c6	d1

Course specification of postgraduate

7.2. Assessment schedules

Method	Week(s)
Practical exams	**45**
written exams	**45-48**
Oral Exam	**45-48**

7.3. Weight of assessments

Assessment	Weight of assessment
Practical exams	30
Final exams	50
Oral Exam	20
total	100

8- List of references

8.1. Notes and books

Departmental notes on:

- Text book of Animal, Poultry and Environmental Hygiene(Parts I & II) Professor/ Mohammed Abdel Rahman Elbably and Dr/ Asmaa Nady Mohammed

Practical notes on Animal, Poultry and Environmental Hygiene (Parts I & II)
Professor/ Mohammed Abdel Rahman Elbably and Dr/ Asmaa Nady Mohammed

8.2. Essential books:

- A Manual Of Veterinary Hygiene Sir Frederick Smith (Author) Published By: General Books
- Water pollution (causes, effects and control) P.K Goel
- Principles and practice of soil science R.E White, Blackwell Science (2001).
- Farm animal Health and Disease control John K. Philadelphia 1982
- Animal Health and Housing. "David Sainsbury", London, Bailliere, Tindal and Cassel 1997.
- Animal Health and Housing. "David Sainsbury" Blackwell Science 2000.
- Keeping livestock healthy, N Bruce Haynes (2001).
- Disinfection, Sterilization and preservation Seymour S Block, Block Lea Febiger (1991)

8.3. Recommended texts

1. Veterinary Hygiene by Robert Georg Linton (Paperback - 8 Jan 2010)
2. Veterinary Hygiene by R.G Linton (Hardcover - 1940)
3. A Manual of Veterinary Hygiene Sir Frederick Smith (Author) Published By: General Books
4. Fundamental pollution: By Krishman Kannan 1997, S. Chard and Company LTD.

Course specification of postgraduate

5. Veterinary Hygiene by Robert Georg Linton (Paperback - 8 Jan 2010)
6- Veterinary Hygiene by R.G Linton (Hardcover - 1940)

8.4. Journals, Websites ……..etc

Journals:

1. Veterinary Bulletin
2. Journal of Animal Science
3. Journal Toxicology and Environmental Health
4. J. Environmental managing
5. Environmental pollution
6. Journal Veterinary Research

J. Environ. Quality

Websites:

1. www.thepigsite.com/
2. www.disinfectants1.com
3. www.thepigsite.com/
4. www.disinfectants1.com
5. -www.rvc.ac.uk
6. www.who.com

Course Coordinators **Head of Department**

Dr. Asmaa Nady Mohammed **Prof. Dr. Mohamed Ali**

Beni Suef University
Faculty of Veterinary Medicine

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
	1st semester		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Introduction	1	a1,a2	-	-	-
2	Environmental Hygiene	2-4	a 3	b1	C1	d3
3	Environment and parasitic diseases	5-6	a4	b3	C2	d2
4	Systems of animal housing	7-9	a 1,a 6	b4	C3	d2
5	Internal parasites of animals	10	a1	b 5	C 3	d 3
6	External parasites of animals	11-12	a 1	b5	C3	d 3
7	Introduction	1	a 7	-	-	-
8	Epidemiology of parasitic zoonoses	2-3	a 7	b 6	c 3,c5	d2
9	Protozoan zoonoses	4-6	a 7	b 6	c 3	d 1
	Cestode zoonoses	7	a 7	b 6	c 3	d 1
10	Trematode zoonoses	8-10	a 7	b 6	c 3	d 1
	2nd semester					
10	Hygienic disposal of animal wastes	13	a 4	b7	c4	d 2
11	Pesticides	14	a 1	b5	c3	d3
12	Control internal parasites	15-16	a6	b7	c7	d3
13	Control external parasites	17-18	a6	b7	c7	d3
14	Student activities		a1,a2	b1	c1,c2	d1,d3
15	Arthropode zoonoses	11-12	a 7	b 6	c 3	d 1
16	Nematode zoonoses	13-15	a 7	b 6	c 3	d 1
	Diagnosis of parasitic zoonoses	16	a 7	b 6	c 3	d 1

Course specification

	Guidelines in control of parasitic zoonoses	17-18	a 7	b 6	c 3	d 1, d 3

Beni-Suef University
Faculty of Veterinary Medicine
Pathology Department

Course specification

A- Administrative Information:

Course Code:	D15
Course title :	Pathology of parasitic diseases
Academic year:	Postgraduate students.
Program title:	Diploma of Vet. Med. Sciences (Applied Parasitology).
Degree:	Diploma.
Contact hours/ week	3 hours per week (1hr theoretical and 2hr practical).
Course coordinator:	Dr. EL-Shaymaa Nabil EL-Nahass
External evaluator(s)	Prof. Dr. Sary Khalil
Date of course approval:	September, 2017

B-Professional information

1- Overall aims of course:

This course aims to:

By the end of this course the graduate should be able to understand Mechanism, by which the disease developed, progressed and squealed. Understand the mechanisms of parasitic lesion development. recognize thecharacters of lesions of helminthes, protozoa and insects.

2- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

At the end of this course, the student must able to:

a.1. Recall Knowledge about the molecular and cellular response of the living body when exposed to injurious agent

a.2. Outline the relationship between causes and tissue/organ changes.

a.3. Describe the macroscopic & microscopic tissue changes nematode, cestoda, trematoda, protozoa, and insect infection.

a.4. Recognize Knowledge about typing and classification of different Helminth affections.

a.5. Illustrate the pathogenesis of parasitic diseases.

b.**Intellectual skills:**

By the end of studying this course, the graduate should be able to:-

b1. Discriminate between tissue/organ appearance in health and diseased animal.

b.2. Di erentiate between the di erent pathological alterations in parasitic disease

b3. Score the microscopic pathological picture of parasitic diseases.

b.4. Interpret correctly the pathological data obtained the macroscopic and microscopic examination to reach final diagnosis.

b.5. Integrate the pathological alterations with the parasitic cause.

c.Professional and practical skills

By the end of studying this course, the graduate should be able to:-

c1.Select the necessary techniques for sample reception & processing according to the nature of specimen received.

c.2. Examine and identify the macroscopic criteria of the pathological alterations.

c.3. Examine and identify the microscopic criteria of the parasitic disease.

c4. Perform diagnosis and full description for the pathological picture based on the gross and histopathological examination

c5. Write a report commenting on a pathological specimens

d- General and transferable skills

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

d1. Demonstrate the ability of problem definition

d.2. Utilize the computer, microscope and internet

d.3. Use data analysis and communication skills

d.4. Utilize various computer based instruction tools and E-learning of Pathology and utilize a variety of computer-based self assessment tools.

d.5 Use the sources of biomedical information available to remain current with advances in knowledge and practice

d.6-lead a teamwork in a certain professional task.

d.7- own continouse and self learninig.

3- Topics and contents

Course	Topic	Total no. of hours	Lect.	Pract.
Postgraduate students Pathology of parasitic diseases 3 hours / weak (Lec. 1hr/wk - Pract. 2hr/wk)	**1. Introduction in pathology and histopathological techniques**	**9**	**3**	**6**
	2- General bases of pathological alterations (dist. In cell metabolism, Cell death, dist. In circulation, inflammation and healing and general tumors)	**18**	**6**	**12**
	3.Host response to parasites. Classification of helminthes- Parasitic infestation of the skin	**12**	**4**	**8**
	4.Parasitic infestation of the respiratory system	**12**	**4**	**8**
	5.Parasitic infestation of the gastrointestinal tract	**9**	**3**	**6**
	6.Parasitic infestation of the liver	**12**	**4**	**8**
	7.Parasitic infestation of the muscles	**12**	**4**	**8**
	8.Anaplasmosis, babesiasis&thelaziasis	**12**	**4**	**8**
	9-Activities	**12**	**4**	**8**
	Total	**108**	**36**	**72**

4-Teaching and learning methods

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

5.1.1. White board and data-show presentations.

5.1.2. Educational preserved specimens.

5.1.3. Illustrations, anatomical charts, CD's, PowerPoint slides and recorded anatomy videos.

5.2. Laboratory sessions in which one or more of the following facilities are used:

5.2.1. Tutor presentation followed by students' small group sessions.

5.2.2. Educational models.

5.2.3. Demonstrating formalin preserved tissues.

5.3. Independent (laboratory and home assignments supervised by tutor)

5.3.1. Writing reports and assignments (computer researches and faculty library attendance).

5.3.2. Preparation of colored posters and slide presentation.

5.3.3. Preparation of preserving specimens.

5.3.4. Group discussion.

5-Student assessment

5.1. 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,	-	d1
Practical Exam	-	b1, b2, b3, b4, b5	c1, c2, c3, c4, c5	d1, d2, d3 ,d6,d7
Oral Exam	a1-a5	b1-b5	c1, c2c3, c4, c5	d1,d2, d3,d5

5.2. Assessment schedules/semester:

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

5.3. Weight of assessments:

Assessment	Weight of assessment
Practical and oral exams	50%
Written exams	50%
Total	100%

6- List of references

8.1. <u>Notes and books:</u>

None

8.2. <u>Essential books:</u>

- **Jubb,K.V., P.C.Kennedy and N.Palmer (1993) Pathology of Domestic Animal, 6th ed. San Diego, New York**
- **Jones, T.C., Hunt, R.D. and King, N.W (2008) Veterinary pathology , 8th ed. Williams and wilkins, Waverly company (2008)**
- **Gallin, J. and Synder , R (2010), In ammation 3rd. ed. Lippincott Williams,Wilkins. Philadelphio**
- **Ramz-I S. and Kumar, V. and Collin, T. (1999) Pathological Basis of Disease , 6th ed .**

- **GREGORY V. LAMANN(2010) veterinary parasitology,4thed. Nova Science Publishers, Inc. † New York.**

These book is available in the library of faculty of Veterinary Medicine, Beni-Suef Univ.

8.3. Recommended textbooks:

8.3.1. R.S. Chauhan (2010) Text Book of veterinary pathology. *1st. ed. IBDC publishers *This book is available online.*

8.3.1 Jaap Van Dijk, Erik Gruys, and Johan Mouwen, COLOR ATLAS OF VETERINARY PATHOLOGY (2006) 2nd ed., Saunders Ltd

8.4. Journals, Websites ……..etc

Journals

- **Egyptian Journal of Comparative Pathology and Clinical Pathology**
- **Pathologia Veterinaria**
- **American Journal of Pathology**
- **Journal of Pathology and Bacteriology**
- **Archive of Pathology**
- **Veterinary Record**
- **Journal of Comparative Pathology**
- **Canadian Journal of comparative Medicine**
- **American Journal of veterinary research**
- **Research on veterinary Science**

-Beni-Suef Veterinary Medical journal
http://www.bsuv.bsu.edu.eg/vetmed.aspx#

Websites

Google searchwww.google.com
Sciencedirecthttp://www.sciencedirect.com.
Pubmed http://www.Pubmed.
Colorado State university onlinehttp://www.online.colostate.edu/courses/VS/VS333.dot
The university of adelaidehttps://www.adelaide.edu.au/course-outlines/104377/1/sem-1/
VET Veterinary Educational Toolshttp://www.cvmbs.colostate.edu/vetneuro/
Education platformhttp://ivsascove.wix.com/eduplatform#!anatomy-hist-embr/ctsm
http/cms.nelc.edu.eg
www.asvp.asn.au.com
www.geneng news.com
www.altcancer.com

Course Coordinator

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Course specification Matrix

Topic		Week	Intended learning outcomes of course (ILOs)			
			K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
Postgraduate students Pathology of parasitic diseases 3 hours / weak (Lec. 1hr/wk - Pract. 2hr/wk)	1. Introduction in pathology and histopathological techniques	1-3	1,3	1,5		
	2- General bases of pathological alterations (dist. In cell metabolism, Cell death, dist. In circulation, inflammation and healing and general tumors)	4-9	1,2,3,4	1,2,3,4,5	1, 2,3,4	1-7
	3.Host response to parasites. Classification of helminthes- Parasitic infestation of the skin	10-13	1,2,3,4,5	1,2,3,4,5	1, 2,3,4	
	4.Parasitic infestation of the respiratory system	14-17	1,2,3,4,5	1,2,3,4,5	1, 2,3,4,5	
	5.Parasitic infestation of the gastrointestinal tract	18-20	1,2,3,4,5	1,2,3,4,5	1, 2,3,4	
	6.Parasitic infestation of the liver	21-24	1,2,3,5	1,2,3,4,5	1, 2,3,4,5	
	7.Parasitic infestation of the muscles	25-28	1,2,3	1,2,3,4,5	1, 2,3,4,5	
	8.Anaplasmosis, babesiasis&thelaziasis	29-32	1,2,3,5	1,2,3,4,5	1, 2,3,4,5	
	9-Activities	33-36	1,2,3,5	1,2,3,4,5	1, 2,3,4,5	

Beni-Suef University
Faculty of Veterinary Medicine
Parasitology department

Course specification of postgraduate

1-Basic information

Course Code:	
Course title :	Protozoology
Program title:	Diploma of Applied Parasitology
Contact hours/ week	2 hours per week (1hr theoretical and 1hr practical).
Approval Date	

2-Professional information

Overall aims of course:

This course aims to:

After completing the postgraduate course in Protozoology the postgraduate student will be able to:

- Understand reproduction, classification and structure of protozoa.
- Compare between salivarian trypanosomes and stercorarian trypanosomes (morphobiology).
- Differentiate between trophozoite and cyst form of (*Trichomonas, Giardia*, *Hexamita*, *Entamoeba histolytica, E.coli, Histomonas*).
- Recognize the life cycle, pathogenesis and diagnosis of different protozoa in infected hosts.
- Write a report about morphology, life cycle, disease and diagnosis of *Babesia, Theileria* and *Anaplasma*.
- Summarize morphology, biology and diagnosis (hepatic and blood stages), of *Plasmodium*, *Haemoproteus* and *Leucocytozoon.*
- Describe morphology and life cycle of *Toxoplasma, Sarcocysts, Neospora, Besnoitia, Hammondia* and *Frenklia.*
-Recognize morphology and life cycle of *Isospora*, *Wenyonella*, *Tyzzeria* and *Cryptosporidium.*
-Utilize general diagnostic techniques to diagnose the parasitic protozoa infestation.
- Realize different strategies of controlling and prevention of the protozoa infestation.

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. Identify structure, physiology, reproduction and classification of protozoa.

a.2. Recognize the morphobiology of salivarian trypanosomes and stercorarian trypanosomes.

a.3- Describe morphology and biology of *Plasmodium*, *Haemoproteus* and *Leucocytozoon.*

a.4- Illustrate morphology, life cycle and disease of *Babesia, Theileria* and *Anaplasma*.

a.5-Understand morphology and life cycle of *Toxoplasma, Sarcocysts, Neospora, Besnoitia, Hammondia* and *Frenklia.*

a.6-Realize different methods of laboratory diagnosis to diagnose the parasitic protozoa infestation.

a.7-Summarize different strategies of controlling and prevention of the protozoa infestation

b-Intellectual skills

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

b.1. Compare between morphobiology of salivarian trypanosomes and stercorarian trypanosomes.

b.2. Differentiate between trophozoite and cyst form of (*Trichomonas, Giardia*, *Hexamita*,

Course specification of postgraduate

Entamoeba histolytica, E.coli, Histomonas)..

b.3. Relate morphology and life cycle of *Isospora*, *Wenyonella*, *Tyzzeria* and *Cryptosporidium*.

b.4.Correlate between Microspora, Myxozoa and ciliates.

b.5.Intrtpret morphology and life cycle of *Toxoplasma, Sarcocysts, Neospora, Besnoitia, Hammondia* and *Frenklia*

b.6.Utilize different methods of laboratory diagnosis and controlling of the protozoa infestation.

C- Professional and practical skills

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

c.1**.** Obtain skills handling and preservation of infected samples.
c.2- Evaluate clinical and subclinical infection in the different animal hosts.
c.3**-** Employ the different diagnostic techniques to diagnose the parasitic infections
c.4- Write a scientific report.

d- General and transferable skills

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

d1. Work effectively in a team.
d2. Use efficiently source of knowledge.
d3. Able to transfer the experience to others.
d4. Characterize and differentiate various parasitic affections.

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4-Topics and contents

week	Topic	No. of hours	Lectures	Practical
1	Introduction and physiology of protozoa.	**2**	**1**	**1**
2	Reproduction, classification and structure of protozoa.	**2**	**1**	**1**
3-7	Flagellates, salivarian trypanosomes, morphobiology, control.	**10**	**5**	**5**
8-10	Stercorarian trypanosomes, *Leishmania*	**6**	**3**	**3**
11-13	*Trichomonas, Giardia*, *Hexamita* cyst and trophozoite.	**6**	**3**	**3**
14-15	*Histomonas*, Sarcodines, *Entamoeba histolytica, E.coli* cyst, trophozoite	**4**	**2**	**2**
16-20	Apicomplexa, Introduction.	**10**	**5**	**5**
21-22	*Isospora*, *Wenyonella*, *Tyzzeria*, *Cryptosporidium*, morphology	**4**	**2**	**2**
23-26	*Toxoplasma, Sarcocysts, Neospora, Besnoitia, Hammondia, Frenklia*	**8**	**4**	**4**
27-30	*Plasmodium*, *Haemoproteus*,	**8**	**4**	**4**

Course specification of postgraduate

	Leucocytozoon, morphology, biology, diagnosis (hepatic and blood stages), life cycle, control.			
31-34	*Babesia, Theileria, Anaplasma*, morphology, life cycle, disease, diagnosis, vaccination, control and immunity.	**8**	**4**	**4**
35	Microspora, Myxozoa, ciliates.	**2**	**1**	**1**
36	Clinical and laboratory diagnosis (Obtain skills handling and preservation of infected samples, evaluate clinical and subclinical infection in the different animal hosts, employ the different diagnostic techniques to diagnose the parasitic infections and Write a scientific report).	**2**	**1**	**1**
	Total	**72**	**36**	**36**

Course specification of postgraduate

5-Teaching and learning methods

5.1- Lectures using power point presentation.
5.2- Microscopic mount specimens, posters.
5.3- Collection of field samples for laboratory diagnosis.
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	A2,a3	B1,b2,b3, b4	C1,c2,c3	D1,d2,d3
Practical Exam	A1		C1	D1,d2,d3
Oral Exam	A1,a2,a3	B1,b2,b3, b4	C1,c2,c3	D1,d2,d3,d4,d5,d6

6.2. Assessment schedules

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

6.3. Weight of assessments

Assessment	Weight of assessment
Practical exams	25%
Written exams	50%
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) Veterinary Protozoology. Levine, et al 1980
b) Parasitology for Veterinarians: Georgi, J.R. and Georgi, M.E., 5th editions. W.B. Saunders, (1990).
c) Helminth , Protozoa and Arthropods of Domesticated Animals: Soulsby, E.J.L., 7th edition. Bailliere Tindall,London, (1982).

Diagnostic Veterinary Parasitology: Hendrix, C.M. 2nd edition. Mosby, (1998). 8.3.

Recommended texts:

Course specification of postgraduate

a) Encyclopedic Reference Of Parasitology: Mellhorn, H. 2nd edition. Springer, Berlin, (2001).
b) Foundation of Parasitology: 4th edition, Schmidt,G.D & Robinson,E.J., Times Mirror/Mosby College Publishing, St.Louis, (1989).

Animal Parasitology: Smyth, J.D. 3rd edition. Cambridge University Press. UK, (1998).

7.4. Journals: Parasitology Research.

Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

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

http://www. Parasite.biology.uiowa.edu

- http://www.nhm.ac.uk

Course Coordinators **Head of Department**

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Introduction and physiology of protozoa.	**1**	**2,3**	**1-4**	**1-3**	**1-4**
2	Reproduction, classification and structure of protozoa.	**2**	**2,3**	**1-4**	**1-3**	**1-4**
3	Flagellates, salivarian trypanosomes, morphobiology, control.	**3-7**	**1,2,3**	**1-4**	**1-3**	**1-4**
4	Stercorarian trypanosomes, *Leishmania*	**8-10**	**1,3**	**1-4**	**1-3**	**1-4**
5	*Trichomonas, Giardia*, *Hexamita* cyst and trophozoite	**11-13**	**1,2,3**	**1-4**	**1-3**	**1-4**
6	*Histomonas*, Sarcodines, *Entamoeba histolytica, E.coli* cyst, trophozoite	**14-15**	**1,2,3**	**1-4**	**1-3**	**1-4**
7	Apicomplexa, Introduction.	**16-20**	**1-3**	**1-4**	**1-3**	**1-4**
8	*Isospora*, *Wenyonella*, *Tyzzeria*, *Cryptosporidium*, morphology	**21-22**	**1,2,3**	**1-4**	**1-3**	**1-4**
9	*Toxoplasma, Sarcocysts, Neospora, Besnoitia, Hammondia, Frenklia*	**23-26**	**1,2,3**	**1-4**	**1-3**	**1-4**
10	*Plasmodium*, *Haemoproteus*, *Leucocytozoon*, morphology, biology, diagnosis (hepatic and blood stages), life cycle, control.	**27-30**	**1,3**	**1-4**	**1-3**	**1-4**
11	*Babesia, Theileria, Anaplasma*, morphology, life cycle, disease, diagnosis, vaccination, control and immunity.	**31-34**	**1,3**	**1-4**	**1-3**	**1-4**
12	Microspora, Myxozoa, ciliates.	**35**	**1,2,3**	**1-4**	**1-3**	**1-4**
13	Clinical and laboratory diagnosis (Obtain skills handling and preservation of infected samples, evaluate clinical and subclinical infection in the different animal hosts, employ the different diagnostic techniques to diagnose the parasitic infections and write a scientific report).	**36**		**1-4**	**1-3**	**1-4**

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	
Course title :	Entomology
Program title:	Diploma of Applied Parasitology
Contact hours/ week	2 hours per week (1hr theoretical and 1hr practical)
Approval Date	

2-Professional information

Overall aims of course:

After completing the postgraduate course of entomology, the post graduate student could be able to:

- Identify Introduction, structure and physiology of arthropods.
- Recognize the development and classification of Myriapoda.
- Differentiate between Nematocera and Brachycera
-Understand true flies and its classification.
- Illustrate myiasis and its classification.
- Interpret the morphological features between Arachnida and Insecta.
- Compare between hard and soft ticks.
- Identify the different types of mites.
- Realize different strategies of controlling and prevention of the arthropods infestation.
- Utilize general diagnostic techniques to diagnose the parasitic arthropod infestation.

This course aims to:

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a1. Identify introduction, structure and physiology of arthropods.

a2. Understand morphology and life cycle of both Nematocera and Brachycera.

a3. Recognize true flies and types of myiasis.

a4. Illustrate the morphological features between Arachnida and Insecta.

a5. Identify the different species of ticks and mites infesting animals.

a6. Recognize the different strategies of controlling and prevention of the arthropods infestation.

a7. Summarize general diagnostic techniques to diagnose the parasitic arthropod infestation.

b. Intellectual skills

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

b1. Compare between Nematocera, Brachycera and true flies.

b2. Relate development and classification of Myripoda.

b3. Differentiate between hard and soft ticks.

b4. Interpret different types of myiasis.

Course specification of postgraduate

b5. Differentiate the different species of mites infesting animals.
b6. Utilize general diagnostic techniques to diagnose the parasitic arthropod infestation.
b7. Adapt different strategies of controlling and prevention of the arthropods infestation.

C- Professional and practical skills

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

c1.Obtain arthropod samples, preserve and differentiate both adult and larval stages of insects.
c2. Practice the most prominent clinical and subclinical aspects of arthropod infestation e.g. scabies (mange) and myiasis.
c3. Employ the ideal method for arthropods diagnosis.
c4. Use of the proper insecticides or acaricides.
c5. Perform different ways for application of insecticides.
c6. Write a scientific report.

d- General and transferable skills

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

d1. Work effectively in a team.
d2. Use efficiently source of knowledge.
d3. Able to transfer the experience to others.
d4. Characterize and differentiate various parasitic affections.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
(Lec. 2h./week, Pract 2h./week)	Introduction, structure and physiology of arthropoda.	4	4	-
(Lec. 1h./week, Pract 1h./week)	Development, Classification, Myriapoda	4	2	2
(Lec. 1h./week, Pract 1h./week)	Insecta, Classification, O. Diptera	4	2	2
(Lec. 1h./week, Pract 1h./week)	Nematocera, Brachycera	8	3	5
(Lec. 2h./week, Pract 2h./week)	True flies, Classification, F. Muscidae	6	3	3
(Lec. 2h./week, Pract 2h./week)	*Muscina*, *Stomoxys*, *Fannia*, *Glossina*	6	3	3
(Lec. 2h./week, Pract 2h./week)	Myiasis classification, semispecific myiasis.	8	4	4
(Lec. 2h./week, Pract 2h./week)	Specific myiasis, *Gasterophilus*, *Oestrus*, *Hypoderma*, F. Hippboscida: *Hippobosca,* sheep ked.	6	3	3
(Lec. 1h./week, Pract 1h./week)	O. Coleoptera, Hymenoptera, Siphonaptera, Hemiptera, Mellophaga, Anoplura	8	4	4
(Lec. 2h./week, Pract 2h./week)	Introduction of Arachnida, Classification, Metamorphosis, F. Argasidae	6	3	3
(Lec. 2h./week,	Hard ticks, F. Ixodidae, mites, *Sarcoptes*,	6	3	3

Course specification of postgraduate

Pract 2h./week)	*Psoroptes*			
(Lec. 2h./week, Pract 2h./week)	Demodicidae, Scaley leg, *Demodex*, Crustacea, Cyclops, Pentastomida.	4	2	2
(Lec. 1h./week, Pract 1h./week)	Control of arthropods General diagnostic techniques (Obtain arthropod samples, preserve and differentiate both adult and larval stages of insects, practice the most prominent clinical and subclinical aspects of arthropod infestation e.g. scabies (mange) and myiasis, perform different ways for application of insecticides and Use of the proper insecticides or acaricides).	2	1	1
	Total	72	36	36

5-Teaching and learning methods

5.1.1. Lectures (brain storm, discussion) using board, data shows.

5.1.2. Self learning by preparing essays and presentations (computer researches and faculty library).

5.1.3 Practical (models, samples of……..).

5.4- Video movies for student of special need.

5.2. Laboratory sessions in which one or more of the following facilities are used:

5.2.1. Tutor presentation followed by students' small group sessions.

5.2.2. Freshly collected insects.

5.2.3. Preserved samples of insect dry or in formalin.

5.3. Independent (laboratory and home assignments supervised by tutor)

5.3.1. Writing reports and assignments (computer researches and faculty library attendance).

5.3.2. Preparation of colored posters and slide presentation.

5.3.3. Collection of insects from field trip and preserving the collected specimens.

5.3.4. Group discussion.

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, a5	b1, b2, b3, b4, b7	c1, c2, c3, c4	d1
Practical Exam	a1, a2, a3, a4, a6, a7	b1, b2, b3, b4, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
Oral Exam	a1-a7	b1-b7	c1, c2, c4, c5, c6	d1,d2, d3,d4

Course specification of postgraduate

6.2. Assessment schedules

Method	Week(s)
Practical exams	Managed by department administration
written exams	Managed by faculty administration
Oral Exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Practical exams	25%
written exams	50%
Oral Exam	25%
Total	100%

7- List of references

7.1. Notes and books

7.2. Essential books: Kettle

7.3. Recommended texts

7.4. Journals, Websites ……..etc

Journals: Parasitology Research.
Egyptian Veterinary Medical Society of Parasitology Journal.

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

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)			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Introduction, structure and physiology of arthropoda.	2	a1, a2, a3, a4, a5, a6			d1, d2,
2	Development, Classification. Myriapoda	2	a1, a2, a3, a4, a5 a6,	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
3	Insecta, Classification, O. Diptera	2	a1, a2, a3, a4, a5, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
4	Nematocera, Brachycera	4	a1, a2, a3, a4, a5, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
5	True flies, Classification, F. Muscidae	3	a1, a2, a3, a4, a5, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
6	*Muscina*, *Stomoxys*, *Fannia*, *Glossina*	3	a1, a2, a3, a4, a5, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
7	Myiasis classification, semispecific myiasis	4	a1, a2, a3, a4, a6, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
8	Specific myiasis, *Gasterophilus* ,*Oestrus*, *Hypoderma*, F. Hippboscida: *Hippobosca,* sheep ked	3	a1, a2, a3, a4, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
9	O. Coleoptera, Hymenoptera, Siphonaptera, Hemiptera, Mellophaga, Anoplura	4	a1, a2, a3, a4, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
	Introduction of Arachnida, Classification, Metamorphosis, F. Argasidae	3	a1, a2, a3, a4, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
10	Hard ticks, F. Ixodidae, , mites *Sarcoptes*, *Psoroptes*	3	a1, a2, a3, a4, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
11	Demodicidae, scaley leg, *Demodex*, Crustacea, Cyclops, Pentastomida	2	a1, a2, a3, a4, a6	b1, b2, b3, b4, b5, b6, b7	c1, c2, c3, c4, c5, c6	d1, d2, d3, d4
12	Control of arthropods	1	a4, a6	b1, b2, b3, b4, b5, b6	c4, c5, c6	d1, d2, d3, d4

Course specification

	General diagnostic techniques (Obtain arthropod samples, preserve and differentiate both adult and larval stages of insects, practice the most prominent clinical and subclinical aspects of arthropod infestation e.g. Scabies (mange) and myiasis, perform different ways for application of insecticides and use of the proper insecticides or acaricides).					

Beni-Suef University
Faculty of Veterinary Medicine

Course specification of postgraduate

1-Basic information

Course Code:	
Course title :	Helminthology
Program title:	Diploma of Applied Parasitology
Contact hours/ week	4 hours per week (2hr theoretical and 2hr practical)
Approval Date	

2-Professional information

Overall aims of course:

After completing the postgraduate course of helminthology, the post graduate student could be able to:

- Identify the introduction to Parasitology (nomenclature and classification of the helminths).
- Describe the morphobiology, physiology and classification of trematodes.
- Recognize the morphobiology, physiology and classification of cestodes.
- Understand the morphobiology, physiology and classification of nematodes.
- Differentiate between the morphological features, life cycle, pathogenesis and control of different helminths (trematodes, cestodes and nematodes).
- Realize the disease problems caused by the helminth parasites.
- Apply different approaches to handle, collect and prepare diagnostic laboratory samples.
- Study bases of diagnosis and 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. Recognize different helminths of veterinary importance.
a.2. Understand the morphobiology, physiology and classification of trematodes, cestodes and nematodes.
a.3. Describe the morphological features and biology of the different helminths (trematodes, cestodes and nematodes).
a.4. Understand the pathogenesis and bases of control of the different helminths (trematodes, cestodes and nematodes).
a.5. Illustrate the different diagnostic simple keys and reporting.

b. Intellectual skills:

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

b.1. Differentiate between morphobiology, physiology and classification of trematodes, cestodes and nematodes.
b.2. Compare between the morphological features and biology of the different helminths (trematodes, cestodes and nematodes) .
b.3. Interpret pathogenesis and bases of control of the different helminths.
b.4. Deal with the disease problems caused by the helminth parasites.

Course specification of postgraduate

c- Professional and practical skills:

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

c.1. Obtain skills of collecting, handling and preservation of different samples; blood, feces, skin, biopsy specimens,….

c.3. Perform examination of the macro- and microscopic parasites.

c.4. Practice fecal and blood examination.

c.5. Manage helminth specimens for particular diagnosis.

c.2. Write a scientific report.

d- General and transferable skills

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

d1. Work effectively in a team.

d2. Use efficiently source of knowledge.

d3. Able to transfer the experience to others.

d4. Characterize and differentiate various parasitic affections.

4-Topics and contents

Weeks	Topic	No. of hours	Lectures	Practical
1	Introduction to Parasitology (nomenclature and classification of the helminths).	**2**	2	2
2-5	Trematoda, morphobiology, physiology, classification.	**16**	8	8
6-9	Fasciolidae, Dicrocolidae, Echinostomatidae.	**16**	8	8
10-12	Paramphistomidae, Heterophyidae, Schistosomatidae, Paramphistomatidae.	**12**	6	6
13-15	Cestoda, morphobiology, classification, *Taenia solium,T. saginata, Diphyllobothrium latum.*	**12**	6	6
16-17	Taeniidae, Dilepididae, *Echinococcus*, cysticerci, Hydatid cyst, *Coenurus*, *Dipylidium caninum*.	**8**	4	4
18-20	Anoplocephalidae, Davaeinidae, Hymenolepididae.	**12**	6	6
21-23	Nematoda, morphobiology, classification, *Ascaris lumbricoides*, *A. vitulorum*, *A. equorum*.	**12**	6	6
24-26	O. Ascaroidea, *Toxocara*, *Ascaridia*, *Heterakis*, *Oxyuris*, *Subulura,* eggs.	**12**	6	6
27-29	Strongyloidea, Metastrongylidae	**12**	6	6
30 & 31	Rhabditidae, Trichinelloidea, *Trichuris*,*Trichinella*, eggs.	**8**	4	4
32 & 33	O. Spiruroidea , O. Filaroidea	**8**	4	4
34 & 35	*Habronema,Spirocerca, Dipetalonema evansi*, *Setaria*,microfilariae	**8**	4	4
36	Practical works and different diagnostic simple keys (obtain skills of collecting, handling and preservation of different samples namely; blood, feces , skin, biopsy specimens, perform examination the macro- and microscopic parasites,	**4**		4

Course specification of postgraduate

	Practice fecal and blood examination, manage helminth specimens for particular diagnosis and write a scientific report			
Total		**144**	70	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 faculty library)

5.3- Practical (models, samples of……..).

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, a5	b1, b2, b3, b4	c1, c2, c3, c4	d1
Practical Exam	a1, a2, a3, a4	b1, b2, b3, b4	c1, c2, c3, c4	d1, d2, d3, d4
Oral Exam	a1	b1	c1, c2, c4	d1,d2, d3,d4, d5, d6

6.2. Assessment schedules

Method	**Week(s)**
Practical exams	Managed by department administration
Written exams	Managed by faculty administration
Oral Exam	Managed by department administration

6.3. Weight of assessments

Assessment	Weight of assessment
Practical exams	25%
Written exams	50%
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).

Course specification of postgraduate

b. Veterinary Helminthology: Reinecke, R.K. Butterworth, Pretoria, South Africa, (1983).

c. Veterinary Helminthology: Dunn, SA.M.., 2nd edition. William Heinmann medical books, Ltd. London, UK, (1978).

Diagnostic Veterinary Parasitology: Hendrix, C.M. 2nd edition. Mosby, (1998).

7.3. Recommended texts

- Encyclopedic reference of Parasitology: Mellhorn, H. 2nd edition. Springer, Berlin, (2001).

- Parasitology for veterinarians: Georgi, J.R. and Georgi, M.E., 5th editions. W.B. Saunders, (1990).

7.4. Journals, Websites ……..etc

Journals: Parasitology Research.

Egyptian Veterinary Medical Society of Parasitology Journal.

Websites:

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

Course Coordinators **Head of Department**

Beni Suef University
Faculty of Veterinary Medicine

Course specification

	Topics	week	Intended learning outcomes of course (ILOs)			
	1st semester		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Introduction to Parasitology (nomenclature and classification of the helminths).	1	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
2	Trematoda, morphobiology, physiology, classification.	2-5	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
3	Fasciolidae, Dicrocolidae, Echinostomatidae.	6-9	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
4	Paramphistomidae, Heterophyidae, Schistosomatidae, Paramphistomatidae.	10-12	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
5	Cestoda, morphobiology, classification, *Taenia solium,T. saginata, Diphyllobothrium latum.*	13-15	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
6	Taeniidae, Dilepididae, *Echinococcus*, cysticerci, Hydatid cyst, *Coenurus*, *Dipylidium caninum*.	16-17	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
7	Anoplocephalidae, Davaeinidae, Hymenolepididae.	18-20	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
8	Nematoda, morphobiology, classification, *Ascaris lumbricoides*, *A. vitulorum*, *A. equorum*.	21-23	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
9	O. Ascaroidea, *Toxocara*, *Ascaridia*, *Heterakis*, *Oxyuris*, *Subulura,* eggs.	24-26	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
10	Strongyloidea, Metastrongylidae	27-29	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
11	Rhabditidae, Trichinelloidea, *Trichuris*,*Trichinella*, eggs.	30&31	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
12	O. Spiruroidea , O. Filaroidea	32&33	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	D1,d2,d3,d4
13	*Habronema,Spirocerca, Dipetalonema evansi*, *Setaria*,microfilariae	34&35	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1,	D1,d2,d3,d4

Course specification

					c2,c3,c4,c5	
14	Practical works and different diagnostic simple keys (obtain skills of collecting, handling and preservation of different samples namely; blood, feces , skin, biopsy specimens, perform examination the macro- and microscopic parasites, practice fecal and blood examination, manage helminth specimens for particular diagnosis and write a scientific report.	**36**	A1, a2, a3, a4, a5	B1, b2, b3, b4	C1, c2,c3,c4,c5	**D1,d2,d3,d4**