



Beni-Suef University
Faculty of Veterinary Medicine
Department of Hygiene, Zoonoses and Epidemiology

Program Specification for Master Degree
2017-2018

A-Basic information:

- 1- **Course title:** MVSC. **Specialty:** - M-ZOON
- 2- **Program type:** *Single*
- 3- **Department offering program:** Hygiene, Management and Zoonoses
- 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-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases (diseases that are naturally transmitted between man and vertebrate animals).

2-State different and recent techniques for controlling zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.

3-Provide graduates the opportunity to develop good communication skills, Collect, manage and analyze the scientific data in the field of zoonoses also to write the scientific papers .

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

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

- a.1. Recall knowledge about definition, etiology and occurrence of each zoonotic disease and specify the transmission mechanisms of zoonotic agents from the animals to man.
- a.2. Summarize the factors necessary for producing infection of various zoonoses in human populations & delineate the control strategies applicable to prevent the spread of zoonoses.
- a.3. State the role played by the different species of domestic and wild animals and birds, rodents, the aquatic life and arthropod vectors in the epidemiology of various zoonoses and Outline new zoonoses including those emerging and re-emerging zoonotic diseases.
- a.4. Specify the human diseases spread by animals and the role played by animals in such diseases.
- a.5. Describe advanced diagnostic techniques used in the field of Zoonoses.
- a.6. Apply their knowledge and understanding of Zoonoses to solving of problems of zoonotic nature with the available resources, analysis and discussion of the scientific literature.
- a.7. Identify efficiently veterinary professional practice regulations and ethics.

b- Intellectual capacity:

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

- b.1. Differentiate the characteristic clinical picture of different zoonoses in the animal and human hosts.
- b.2. Assess the specific problems of possible zoonotic origin via analysis of laboratory reports for problem solving.
- b.3- Identify, conceptualize and define research problems.
- b.4- Design a scientific research plan.
- b.5- Evaluate the research data and develop new approach to deal with the research questions.
- b.6- Develop creative approaches to solve technical problems facing him during the completion of the researches project.
- b.7- Identify, summarize and evaluate prior researches finding in a specific area

c- Professional and practical skills:

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

- c.1. Demonstrate of the lantern slides of some lesions of selected zoonoses.
- c.2. Practice the collection, examination and identification of different specimens for various zoonotic agents.
- c.3. Employ the principles of good experimental design and analysis to their own research project.
- c.4. Plan a research project in the field of Zoonoses concerning technical, ethical and safety issues and associated costs.
- c.5. Select and perform relevant statistical analysis on data obtained for their own research.

c.6.- Write efficiently scientific paper and presentation.

d- General and transferable skills:

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

d1- Acquire an ability to learn independently in preparation for own research.

d2- Present research finding in oral and written form using appropriate software (e.g., power point, word, excel and data base).

d.3- Communicate effectively and use of information technology in the development of veterinary professional skills.

d.4- Manage time efficiently and work in research groups.

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.

4- Program Structure and Contents

A- Program duration: At least two academic years from the approval of registration by the Faculty Council and maximum four years. The faculty council has the right to give the applicant another period not exceed two years according to the supervisor request

The first year for preliminary courses study, while the second year for researches and preparation of the Master Thesis.

B- Program structure: Hours/ week:

Basic course: -

Theoretical Practical Total

Subsidiary courses: -

Theoretical Practical Total

Master Thesis: completed during the second academic year.

C- Program courses:

1- basic courses

Code	Course title	Hours /week		Academic year	Teaching duration
		Theoretical	Practical		
	Master Principal course	3	4	Preliminary year	36 weeks
	Research methods	1	3	Preliminary year	36 weeks

2-subsidary courses

Code	Course title	Hours /week		Academic year	Semester
		Theoretical	Practical		
	Selected (3-5) courses depending on the thesis title from the various Faculty Master courses other than specialty of the Master.	5-6	6-9	Preliminary year	36 weeks

D- Courses contents

See master courses specification

5- Program Admission Requirements

a- According to the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate Programs, applicants should have BVSc., from an Egyptian University or equivalent degree from any approved university, with at least general grade (Good) and (Very Good) in the specialized subject.

b- Also if the student has postgraduate diploma in one specialization of total (3 hours) at least with general grade (Good) and (Very good) in the specialized subject.

c- According to Beni-Suef University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects:

I- English language (Toefl or equivalent degree)

d- Admission to the program is open during March and September annually after at least one year from the BVSc degree.

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 time for written exam.	Degree	
		Theoretical	Practical and oral exam
≥ 3 hours	3 hours	50	50
≤ 3 hours	2 hours	25	25

- It is mandatory to pass all the courses each chance except biostatic (212)
- The passing mark in each exam is $\geq 60\%$.
- The faculty council has the right to deprive the applicant from entering the exams if his attendance courses is less than 75% .

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 Master 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.
- The applicant should publish at least one scientific papers from the thesis in local or international journals

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 according to University regulations.

1-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

2-Master Thesis:

All master-degree students should prepare a thesis in Zoonoses. The department council must approve the protocol (plan) of the research. The thesis is supervised by one 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. The applicant should publish at least one scientific paper from the thesis in local or international journals

B-Matrix alignment of the measured ILOS.

8- Evaluation of Program Intended Learning Outcomes

Assessments methods	Matrix alignment of the measured ILOs			
	K&U (a)	I.S (b)	P&P. S (c)	G&T. S (d)
Written exam	a.1,a.2,a.3,a.4 ,a.5	b1,b.7	c.3, ,c.5 ,c.6,	d.1,d.2
Practical exam	a.5,a.6,a.7	b.1,b.2,b.6	c.1,c.2,c.4	d.2,d.4
Oral exam	a.1,a.2,a.3,a.4 ,a.5,a.6,a.7	b.1,b.2,b.3,b. 4,b.5,b.6,b.7	c.1,c.2,c.3,c.4,c 5,c.6	d.1,d.2,d.3,d.4
Evaluator	Tool		Sample	
1. Post graduate Students	Questionnaire at the end of the program		All the PG students	
4. External Evaluators	Review program and courses Attending the final exam		Once before implementation annual report	
5. College Quality Assurance committee	Annual program reviewer			

Course coordinator
Dr./Gihan Kamal eldin Abdel-latif

Head of the Department
Dr./ Mohamed Ali Ibrahim

Master program specification matrix (program courses with ILOS)

Program ILOS		Courses
Knowledge and understanding	A1 A2 A3 A4 A5 A6 A7	Principle, 196-197-198,118 195,190 196 196 122-100-102-97-95 221 -222-191 113-118
Intelectuall skills	B1 B2 B3 B4 B5 B6 B7	196,principle Thesis 178,87,122,113,116,128,181,100 Thesis, 221 92-116-195 190 thesis
Professional and practical skills	C1 C2 C3 C4 C5 C6	196,principle 196 195,116,92 178 Thesis 212
General and transferrable skills	D1 D2 D3	Thesis 222 223

Master program specification matrix (program ILOS with academic standerds ARS)

Academic standards Program ILOs	Knowledge and understanding						Intelectuall skills							Professional and practical skills				General and transferrable skills							
	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	c.1	c.2	c.3	c.4	d.1	d.2	d.3	d.4	d.5	d.6	d.7	
Knowledge and understanding																									
a.1	+																								
a.2	+	+																							
a.3	+	+									+														

a.4	+		+									+													
a.5														+				+							
a.6						+	+	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	
a.7				+	+	+											+					+			
Intellectual skills																									
b.1	+							+							+			+							
b.2			+					+						+	+	+				+	+				
b.3									+		+				+					+	+				
b.4						+				+		+				+	+			+		+	+	+	
b.5						+						+			+	+								+	
b.6				+	+	+		+	+			+	+								+	+	+	+	
b.7			+			+						+					+		+	+				+	
Professional and practical skills																									
c.1	+	+																					+		
c.2			+																				+		
c.3				+	+	+	+		+		+	+	+	+		+							+	+	+
c.4			+		+	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	
c.5					+	+	+		+				+		+			+		+		+	+	+	
c.6					+	+									+		+	+							
General and transferrable skills																									
d.1	+	+	+	+	+	+	+	+	+	+	+	+	+						+	+				+	

d.2					+	+	+	+	+	+		+	+	+		+					+				
d.3		+		+	+			+	+		+	+			+		+								
d.4									+		+	+			+	+	+						+	+	+

Program aims – ILOS Matrix for the Master program (M-Zoon)

مصفوفة اهداف البرنامج مع مخرجات التعلم المستهدفة

Program ILOs		Program aims		
Program ILOS		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
Knowledge and understanding	a.1. Recall knowledge about definition, etiology and occurrence of each zoonotic disease and specify the transmission mechanisms of zoonotic agents from the animals to man.	√		
	a.2. Summarize the factors	√		

Program ILOs		Program aims		
Program ILOS		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
	<p>necessary for producing infection of various zoonoses in human populations & delineate the control strategies applicable to prevent the spread of zoonoses.</p>			
	<p>a..3. State the role played by the different species of domestic and wild animals and birds, rodents, the aquatic life and arthropod vectors in the epidemiology of various zoonoses and Outline new zoonoses including those emerging and re-emerging zoonotic diseases.</p>	√		

Program ILOS	Program ILOs	Program aims		
		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
	a.4. Specify the human diseases spread by animals and the role played by animals in such diseases.	√		
	a.5. Describe advanced diagnostic techniques used in the field of Zoonoses.		√	√
	a.6. Apply their knowledge and understanding of Zoonoses to solving of problems of zoonotic nature with the available resources, analysis and discussion of the scientific literature.	√		
	a.7. Identify efficiently	√		√

Program ILOs		Program aims		
		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
	veterinary professional practice regulations and ethics.			
Intellectual skills	b.1. Differentiate the characteristic clinical picture of different zoonoses in the animal and human hosts.	√		
	b.2. Assess the specific problems of possible zoonotic origin via analysis of laboratory reports for problem solving.			

Program ILOS		Program ILOs			Program aims		
		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.			
	b.3- Identify, conceptualize and define research problems						
	b.4- Design a scientific research plan.		√				
	b.5- Evaluate the research data and develop new approach to deal with the research questions.		√	√			
	b.6- Develop creative approaches to solve technical problems facing him during the completion if the researches project.		√	√			
	b.7- Identify, summarize and evaluate prior researches finding in a specific area	√	√	√			
an d pro fes sio	c.1.Demonstrate of the lantern slides of some lesions		√	√			

Program ILOS		Program ILOs			Program aims		
		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.			
	of selected zoonoses.						
	c.2.Practice the collection, examination and identification of different specimens for various zoonotic agents.					√	
	c.3.Employ the principles of good experimental design and analysis to their own research project.			√		√	
	c.4.Plan a research project in the field of Zoonoses concerning technical, ethical and safety issues and associated costs.			√		√	
	c.5.Select and perform			√		√	

Program ILOs		Program aims		
		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
	relevant statistical analysis on data obtained for their own research.			
	c.6.- Write efficiently scientific paper and presentation.		√	√
General and transferable skills	d1- Acquire an ability to learn independently in preparation for own research.			√
	d2- Present research finding in oral and written from using arrange of appropriate software (e.g., power point, word, excel and data base).			√
	d.3- Communicate			√

Program ILOs		Program aims		
Program ILOS		1-Supply the students with recent information about the epidemiology and socio-economic impact of zoonotic diseases, diseases that are naturally transmitted between man and vertebrate animals.	2-State different and recent techniques for diagnosis, controlling of zoonoses and acquire the recent knowledge concerning techniques, principles and basics of his/her area of learning and other related scientific research.	3-Provide graduates the opportunity to develop good communication skills ,Collect, manage and analyze the scientific data in the field of zoonoses Write the scientific papers and apply for scientific projects in the field of zoonotic diseases.
	effectively and use of information technology in the development of veterinary professional skills.			
	d.4- Mange time efficiently and work in research groups.			√



Master basic course Zoonoses (2017-2018)

1-Basic information

Course Code:	MBC-Zoonoses
Course title :	Master basic course Zoonoses
Academic year:	2017-2018
Program title:	Master Veterinary Medical Sciences (zoonoses)
Contact hours/ week	7 hours/week, (3 Lect.&4 practical/week)
Approval Date	

2-Professional information

Overall aims of course:

This course aims to: give the postgraduate clear knowledge about zoonotic diseases (diseases that are naturally transmitted between man and vertebrate animals), their impact, State different means for diagnosis and control of zoonoses and the importance of one health concept in our daily life.

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. Recall definitions, and epidemiology of zoonotic disease and specify the transmission mechanisms of zoonotic agents from animals to man.
- a..2. Understand the factors necessary for producing infection of various zoonoses in human populations & delineate the control strategies applicable to prevent the spread of zoonoses.
- a..3. Describe the role played by the different species of domestic and wild animals and birds, the aquatic life and arthropod vectors in the epidemiology of various zoonoses and outline new zoonoses including those emerging as well as the pathologic entities that have been known for a long time, but for which the epidemiological connection between man and animals has been unclear until recently.
- a.4. Elicit the human diseases spread by animals and the role played by animals in such diseases and record information about the diseases previously considered to be exclusively human and recognized now to have their counterparts in wild animals.
- a..5. Distinguish the nature of diseases having no significance for the livestock but having public health hazards (e.g. Rodent-Borne Zoonoses).

b-Intellectual skills

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

- b.1. Relate the characteristic clinical picture of different zoonoses in the animal and human s
- b.2. Differentiate the emerging zoonoses and be aware of the measures of their prevention and eradication.



Master basic course Zoonoses (2017-2018)

c-Professional and practical skills

- c.1. Write a report on specific problems of possible zoonotic origin via analysis of case reports.
- c.2. Demonstrate photos of some lesions of selected zoonoses.

d-General and transferable skills

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

- d1- Work in a group and manage time in certain tasks.
- d2- Use different available resources for efficient obtaining of knowledge and information .
- d3- Continuous interaction with the surrounding friends in the field concerning the new emerging zoonotic diseases in our country.

4-Topics and contents

Course	Topic	Weeks	No. of hours	Lectures	No. of hours	Practical
Master Veterinary Medical Sciences (zoonoses)7 hours/week, (3 Lect.&4 practical/week)	-Introduction and epidemiology of zoonoses.	1,2,3	9	3	4	1
	-Bacterial Zoonoses	4,5,6,7,8,9,10,11	24	8	32	8
	-Bacterial food-poisoning	12,13	6	2	12	3
	-Rickettsial Zoonoses	14,15	6	2	8	2
	-Human diseases spread by animals	16,17	6	2	8	2
	-Rodents and their control	18,19	6	2	8	2
	1-Viral Zoonoses	20,21,22,23,24	15	5	20	5
	2-Prion Diseases	25	3	1	1	1
	3-Parasitic Zoonoses					
	-Nematodiasis	26,27	6	2	8	2
	-Cestodiasis	28,29	6	2	8	2
	-Trematodiasis& Arthropod Zoonoses	30,31	6	2	12	3
-Potozoal Zoonoses	32,33,34	9	3	12	3	
Mycotic Zoonoses	35,36	6	2	8	2	



Master basic course Zoonoses (2017-2018)

	Total		108	36	144	36
--	-------	--	-----	----	-----	----

5-Teaching and learning methods

- 5.1- Lectures ,brain storm, discussion) using board, data shows and multimedia
5.2- Self learning by preparing essays and presentations on specific titles to each group using computer researches and faculty library.

6-Teaching and learning methods for the students with disabilities

- Not applicable.

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	1,2,3,4,5	1,2		
Practical exam			1,2,3	
Oral Exam	1,2,3,4,5	1,2	1,2	1,2,3

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	37 th
Written exams	37 th
Oral Exam	37 th

7.3. Weight of assessments:

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

8- List of references

8.1. Notes and books

- hand outs

8.2. Essential books:

- Understanding zoonotic diseases. (Romich, J.A) Thomson Delmar Learning, Australia,



Master basic course Zoonoses (2017-2018)

Brazil and USA. 2008.

-Zoonoses, Biology, Clinical Practice, and Public Health Control (Eds Palmer, S.R.; Soulsby, L. and Simpson, D.I.H.) Oxford Univ. Press, Oxford. 1998.

*These books are available in the library of Faculty of Veterinary Medicine, Beni-Suef.

8.3. Recommended books

- Public Health and Preventive Medicine (Eds Robert B. Wallace and Bradley N. Doebbeling) Appleton & Lange A. Simmon & Schuster, USA, 1993.

- Zoonoses (Ed Martin Shakespeare) 2nd Edition, Pharmaceutical Press, London, 2009.

*These books are available in the library of faculty of veterinary medicine.

8.4. Journals, Websites etc

Journals:

Zoonoses and public health

International journal of zoonoses

Vector-borne and zoonotic disease

Global Veterinaria

Journal of food science

Websites:

-<http://www.vetmed.wisc.edu/pbs/zoonoses/>

-<http://www.WHO.int/en/>

-<http://www.CDC.com/>

-<http://www.OIE.com>



Course specification

Topic	Week	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
-Introduction and epidemiology of zoonoses.	1,2,3	a1,a2	b1,b2	c1	d1,d2,d3
-Bacterial Zoonoses	4,5,6,7,8, 9,10,11	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Bacterial food-poisoning	12,13	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Rickettsial Zoonoses	14,15	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Human diseases spread by animals	16,17	a 1, a 2, a 4	b1,b2	c1,c2	d1,d2,d3
-Rodents and their control	18,19	a 1, a 2, a 5	b1,b2	c1,c2	d1,d2,d3
1-Viral Zoonoses	20,21,22, 23,24	a 1,, a 2	b1,b2	c1,c2	d1,d2,d3
2-Prion Diseases	25	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
3-Parasitic Zoonoses					
-Nematodiases	26,27	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Cestodiases	28,29	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Trematodiases& Arthropod Zoonoses	30,31	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
-Potozoal Zoonoses	32,33,34	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3
4-Mycotic Zoonoses	35,36	a 1, a 2, a 3	b1,b2	c1,c2	d1,d2,d3

Course Coordinators
Dr. Gihan Kamal eldin Abdel-Latif

Head of Department
Dr. Mohamed Ali Ibrahim



Beni- Suef University
Faculty of Veterinary Medicine



Course specification

Date of approval:



Course specification of postgraduate

1-Basic information

Course Code:	M-ZOON 196
Course title :	Advanced Zoonoses
Program title:	Master Degree of Veterinary Science (Zoonoses)
Contact hours/ week	Lecture: 2 practical : 2 Total: 4
Approval Date	

B-Professional information:

1- Overall aims of the course:

- 1- To give clear recent information about the epidemiology, pathogenesis and role played by different animal species in the occurrence of zoonotic diseases.
- 2- To state the socioeconomic impact of zoonotic diseases and different advanced means for controlling zoonoses.
- 3- Provide graduates the opportunity to develop their communication skills.
- 4- Enable graduates to achieve competency in modern laboratory technology.
- 4- Allow graduates to develop practical research project.
- 5- Develop the ability of graduate to engage critically with scientific literature and to discuss and present their own research data.

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

- On successful completion of this course the graduate should be able to:**
- a.1. Acquire knowledge about definition, etiology and occurrence of each zoonotic disease and specify the transmission mechanisms of zoonotic agents from the animals to man.
 - a.2. State the factors necessary for producing infection of various zoonoses in human populations & delineate the control strategies applicable to prevent the



spread of zoonoses.

a..3. State the role played by the different species of domestic and wild animals and birds, the aquatic life and arthropod vectors in the emerging and reemerging of zoonotic diseases.

a.4. Specify the human diseases spread by animals and the role played by animals in such diseases & record information about the diseases previously considered to be exclusively human and recognized now to have their counterparts in wild animals.

a.5. Understand the role of small mammals in transmitting of diseases having public health hazards (e.g. Rodent-Borne Zoonoses).

b- Intellectual skills:

On successful completion of master course, the graduate should be able to:

b1- Identify research problems.

b2- Evaluate their own research data and develop new approach to solving their research questions.

b3- Develop creative approaches to solving technical problems or issues associate with running researches project.

b4- Identify, summarize and evaluate prior researches finding in the area of study.

b.5. Differentiate the characteristic clinical picture of different zoonoses in the animal and human hosts.

b.6. Score the exotic zoonotic diseases probably introduced from other countries and be aware of the measures of their prevention and eradication before being entrenched.

b.7. Assess the specific problems of possible zoonotic origin via analysis of laboratory reports.

b.8. Demonstrate of the lantern slides of some lesions of selected zoonoses.

c- Professional and practical skills:

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

c1- Apply the principles of good experimental design and analysis to their own research project.

c2- Select and perform relevant statistical analysis on data obtained for their own research.

c3- Practice the collection, examination and identification of different specimens for various zoonotic agents.

c4- Schedule the occurrence of different species of rodents prevailing in the Egyptian environment and demonstrate morphological identification and various methods of control each species.

d- General and transferable skills:

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

- d.1. Use library facilities and internet technology.
- d.2. Manage time and work in group.

4-Topics and contents

Course	Topic	weeks	No. of hours	Lectures	Practical
M-ZOON 196 Advanced Zoonoses (Lecture: 2 practical: 2 Total: 4)	-Introduction to zoonoses	1	2	1	-
	-Epidemiology of zoonoses.	2	4	1	1
	-Emerging zoonoses	3	4	1	1
	-General prevention and control of zoonose	4	4	1	1
	-Bacterial Zoonoses transmitted from animals , different animal reservoirs	5,6,7, 8,9,10	24	6	6
	-Rodents classification and behavior	11	6	1	2
	-Diseases transmitted by rodents	12	4	1	1
	-Scheme for control of rodents.	13	4	1	1
	Food borne zoonotic diseases and principles of food safety	14,15	8	2	2
M-ZOON 196 Advanced Zoonoses (Lecture: 2 practical: 2 Total: 4)	-Identification of Rickettsial Zoonoses	16	4	1	1
	-Diseases causes by reckettsia	17	4	1	1
	-Human diseases spread by animals	18	4	1	1
	1-Viral Zoonoses	19,20, 21,22, 23,24	24	6	6
	2-Prion Diseases	25	4	1	1
	3-Parasitic Zoonoses				
	-Nematodiasis	26,27	8	2	2
	-Cestodiasis	28,29	8	2	2
	-Trematodiasis	30,31	8	2	2
-Potozoal Zoonoses	32,33	8	2	2	
-Arthropod Zoonoses	34	4	1	1	
Mycotic Zoonoses	35,36	8	2	2	
Total			144	72	72

5-Teaching and learning methods

5.1- Lectures using board, data shows and multimedia



5.2- Self learning by preparing essays and presentations on specific titles to each group using computer researches and faculty library.

6-Teaching and learning methods for the students with disabilities

- Not applicable.

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	a1,a2,a3,a4,a5	b1,b2,b3,b4		
Practical Exam			c1c2,c3,c4,	
Oral Exam	a1,a2,a3,a4,a5	b5,b6,b7,b8	1,2	d1,d2

7.2. Assessment schedules/semester:

Method	Week(s)
Written exams	37 th
Oral Exam	37 th

7.3. Weight of assessments:

Assessment	Weight of assessment
Written exams	50
Practical exam	25
Oral Exam	25
	100

8- List of references

8.1. Notes and books

-Hand outs

8.2. Essential books:

-Understanding zoonotic diseases. (Romich, J.A) Thomson Delmar Learning, Australia, Brazil and USA. 2008.

-Zoonoses, Biology, Clinical Practice, and Public Health Control (Eds Palmer, S.R.; Soulsby, L. and Simpson, D.I.H.) Oxford Univ. Press, Oxford. 1998.

*These books are available in the library of Faculty of Veterinary Medicine, Beni-Suef.



8.3. Recommended books

- Public Health and Preventive Medicine (Eds Robert B. Wallace and Bradley N. Doebbeling)
Appleton & Lange A. Simmon & Schuster, USA, 1993.

- Zoonoses (Ed Martin Shakespeare) 2nd Edition, Pharmaceutical Press, London, 2009.

*These books are available in the library of faculty of veterinary medicine.

8.4. Journals, Websites etc

Journals:

Zoonoses and public health

International journal of zoonoses

Vector-borne and zoonotic disease

Global Veterinaria

Journal of food science

Websites:

-<http://www.vetmed.wisc.edu/pbs/zoonoses/>

-<http://www.WHO.int/en/>

-<http://www.CDC.com/>

-<http://www.OIE.com>

Course Coordinators
Dr. Gihan Kamal eldin Abdel-latif

Head of Department
Prof. Dr. Mohamed Ali Ibrahim



Topic	Week	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
-Introduction to zoonoses	1	a1,a2	b1,b2,b3,b4	c1,c2	d1,d2
- Epidemiology of zoonoses.	2	a1,a2	b1,b2,b3,b4	c1,c2	d1,d2
-Emerging zoonoses	3	a1,a2	b1,b2,b3,b4	c1,c2	d1,d2
-General prevention and control of zoonose	4	a1,a2	b1,b2,b3,b4	c1,c2	d1,d2
-Bacterial Zoonoses transmitted from animals, different animal reservoirs	5,6,7,8,9,10	a 1, a 2, a 3	b5,b6,b7,b8	c3	d1,d2
-Rodents classification and behavior	11	a 1, a 2, a 5		c4	d1,d2
-Diseases transmitted by rodents	12		b5,b6,b7,b8		
-Scheme for control of rodents.	13				
- Food borne zoonotic diseases and principles of food safety	14-15	a 1, a 2, a 3	b5,b6,b7,b8	c3	d1,d2
-Identification of Rickettsial Zoonoses	16	a 1, a 2, a 3	b5,b6,b7,b8	c3	d1,d2
-diseases causes by reckettsia	17				
-Human diseases spread by animals	18	a 1, a 2, a 4	b5,b6,b7,b8	c3	d1,d2
1-Viral Zoonoses	19,20,21,22,23,24	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2
2-Prion Diseases	25	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2



3-Parasitic Zoonoses					
-Nematodiasis	26,27	a 1, a 2, a3,a 4a	b5,b6,b7,b8	c3	d1,d2
-Cestodiasis	28,29	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2
-Trematodiasis	30,31	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2
-Protozoal Zoonoses	32,33	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2
-Arthropod Zoonoses	34	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2
Mycotic Zoonoses	35-36	a 1, a 2, a3,a 4	b5,b6,b7,b8	c3	d1,d2



Course specification of postgraduate

1-Basic information

Course Code:	M-ZOON 197
Course title :	Role of rodents in transmission of Zoonoses
Program title:	Master Degree in Veterinary Science (Zoonoses)
Contact hours/ week	Lecture: 2 practical : 2 Total: 4
Approval Date	

B-Professional information:

1- Overall aims of the program:

- 1-To acquire advanced knowledge and skills about the nature of rodent-borne Zoonoses and their public health hazards and collect specimens of rodents prevalent in the Egyptian environment and identifies each type morphologically with demonstration of the various methods of rodent control.
- 2-Provide graduates the opportunity to develop communication skills.
- 3-Enable graduates to acquire knowledge about the advanced laboratory techniques.
- 4-Allow graduates to develop their practical research experience.
- 5-Develop the ability of graduate to deal with scientific literature and to professionally review and present their own research data.

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

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

- a1. Define nature of rodent-borne Zoonoses and their significance as a public health hazard.
- a.2. Identify species of rodents prevailing in the Egyptian environment.
- a.3. Discuss the factors necessary for producing rodent-borne zoonoses.
- a.4. Describe the transmission mechanisms of zoonotic agents from the rodents to man.
- a.5. Summarize the various old and recent methods of rodent control.

b- Intellectual skills:

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

- b1- Identify the research problems and questions.



b2- Evaluate their own research data and develop new approach to solving their research questions

b3- develop creative approaches to solving technical problems or issues associate with running researches.

b4- identify, summarize and evaluate prior researches finding in a specific area

b5- Interpret the lantern slides of some lesions of selected rodent-borne Zoonoses.

b.6- Take decisions regarding the control strategies applicable to prevent the spread of rodent-borne Zoonoses.

c- Professional and practical skills:

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

c1- Apply the principles of good experimental design and analysis to their own research project.

c2- Select and perform relevant statistical analysis on data obtained for their own research.

c.3. Collect specimens of rodents prevailing in the Egyptian environment and identify each type morphologically with demonstration of the various methods of rodent control.

c.4. Perform the research plan of his/her MVSc thesis.

d- General and transferable skills:

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

-d.1. Use library facilities and internet technology.

-d.2. Manage scientific meetings.

4-Topics and contents

Course	Topic	weeks	No. of hours	Lectures	Practical
M-ZOON 197 Role of rodents in transmission of zoonoses (Lecture: 2 practical : 2 Total: 4)	-Rodent species and classification	1,2	8	2	2
	-Rodent behavior	3	4	1	1
	-Rodent species prevailing in Egypt	4,5	8	2	2
	-Economic losses caused by of rodent	6	4	1	1
	-Bacterial Zoonoses transmitted by rodents	7,8,9,10	16	4	4
	-Identification of Rickettsial Zoonoses	11	4	1	1
	-Reckettisial zoonoses transmitted by	12,13,	20	5	5

	rodents.	14,15, 16			
	-Human diseases spread by rodent	17,18	8	2	2
M-ZOON 197 Role of rodents in transmission of zoonoses (Lecture: 2 practical: 2 Total: 4)	-Viral Zoonoses transmitted by rodents	19,20, 21,22, 23,24	24	6	6
	-Nematodiasis transmitted by rodents	25,26	8	2	2
	-Cestodiasis transmitted by rodents	27,28	8	2	2
	-Trematodiasis transmitted by rodents	29,30	8	2	2
	-Protozoal Zoonoses transmitted by rodents	31,32	8	2	2
	Mycotic Zoonoses transmitted by rodents	33,34	8	2	2
	Rodent control	35,36	8	2	2
Total			144	36	36

5-Teaching and learning methods

5.1- Lectures using board, data shows and multimedia

5.2- Self learning by preparing essays and presentations on specific titles on rodent borne zoonoses using computer researches and faculty library.

6-Teaching and learning methods for the students with disabilities

- Not applicable.

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	LS	P&P.S	G.S
Written Exam	a1, a3,a4,a5	b1,b2,b4		
Practical Exam		b6	c1,c2,c3,c4	
Oral Exam	a2	b3,b5		d1,d2

7.2. Assessment schedules/semester:

Method	Week(s)
--------	---------



Written exams	37 th
Oral Exam	37 th

7.3. Weight of assessments:

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

8- List of references

8.1. Notes and books

-Hand outs

8.2. Essential books:

-Understanding zoonotic diseases. (Romich, J.A) Thomson Delmar Learning, Australia, Brazil and USA. 2008.

-Zoonoses, Biology, Clinical Practice, and Public Health Control (Eds Palmer, S.R.; Soulsby, L. and Simpson, D.I.H.) Oxford Univ. Press, Oxford. 1998.

*These books are available in the library of Faculty of Veterinary Medicine, Beni-Suef.

8.3. Recommended books

- Public Health and Preventive Medicine (Eds Robert B. Wallace and Bradley N. Doebbeling) Appleton & Lange A. Simmon & Schuster, USA, 1993.

- Zoonoses (Ed Martin Shakespeare) 2nd Edition, Pharmaceutical Press, London, 2009.

*These books are available in the library of faculty of veterinary medicine.

8.4. Journals, Websites etc

Journals:

Zoonoses and public health

International journal of zoonoses

Vector-borne and zoonotic disease

Global Veterinaria

Journal of food science

Websites:

-<http://www.vetmed.wisc.edu/pbs/zoonoses/>

-<http://www.WHO.int/en/>

-<http://www.CDC.com/>

-<http://www.OIE.com>

Course Coordinators

Head of Department



Beni-Suef University
Faculty of Veterinary Medicine



Dr. Gihan Kamal eldin Abdel-latif

Prof. Dr. Mohamed Ali Ibrahim



B- Matrix alignment of the measured ILOs

Topic	Week	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
-Rodent species and classification	12	a1	b1,b2,b3,b4	c1	d1,d2
-Rodent behavior	3	a1.	b1,b2,b3,b4	c1	d1,d2
-Rodent species prevailing in Egypt	4,5	a2	b1,b2,b3,b4	c3	d1,d
-Economic losses caused by of rodent	6	a1	b1,b2,b3,b4	c2	d1,d2
-Bacterial Zoonoses transmitted by rodents	7,8,9,10	a 1, a 3, a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Identification of Rickettsial Zoonoses	11	a 1	b1,b2,b3,b4,b5	c4	d1,d2
-Reckettisial zoonoses transmitted by rodents.	12,13,14, 15,16	a 1, a 3, a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Human diseases spread by animals	17,18	a 1, a 3, a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Viral Zoonoses transmitted by rodents	19,20,21, 22,23,24	a 1, a 3, a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Nematodiases transmitted by rodents	25,26	a 1,, a3,a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Cestodiases transmitted by rodents	27,28	a 1, a3,a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Trematodiases transmitted by rodents	29,30	a 1, a3,a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
-Potozoal Zoonoses transmitted by rodents	31,32	a 1, a3,a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
Mycotic Zoonoses transmitted by rodents	33,34	a 1, a3,a 4	b1,b2,b3,b4,b5	c2,c4	d1,d2
Rodent control	35-36	a1,a5	b6	c1,c2,c3 ,c4	d1,d2



Course specification of postgraduate

1-Basic information

Course Code:	M-ZOON 198
Course title :	Role of wild animals in transmission of zoonoses
Program title:	Master Degree of Veterinary Science (Zoonoses)
Contact hours/ week	Lecture: 2 practical : 2 Total: 4
Approval Date	

B-Professional information:

1- Overall aims of the program:

- 1- To give clear, advanced information about the epidemiology, occurrence, socio-economic impact and how to control zoonoses acquired from wild animals.
- 2- Provide graduates the opportunity to develop communication skills.
- 3- Enable graduates to achieve competency in modern laboratory technology.
- 4- Allow graduates to develop practical research project.
- 5- Develop the ability of graduate to create his scientific literature and to critically review and present their own research data.

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

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

- a1. Provide knowledge about definition, etiology and occurrence of each zoonotic disease transmitted by wild animals.
- a.2. Describe the transmission mechanisms of zoonotic agents from the wild animals to man.
- a.3. Recognize the factors necessary for producing infection by zoonoses of wild animal in human populations.
- a.4. Illustrate the control strategies applicable to prevent such zoonoses.
- a.5. Describe the role played by wild animals in the epidemiology of various



zoonoses.

b- Intellectual skills:

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

- b1- Identify, conceptualize and define research problems and questions
- b2- Evaluate their own research data and develop new approach to solving their research questions
- b3- Develop creative approaches to solving technical problems or issues associate with running and researches project.
- b4- identify, summarize and evaluate prior researches finding in a specific area
- b.5. Differentiate the characteristic clinical picture of wild animal zoonoses in humans.
- b.6. Score the role of wild animals in introduction of exotic diseases to Egypt.
- b.7. Interpret laboratory reports to diagnose the specific problem of possible zoonotic origin.
- b.8. Demonstrate of the lantern slides of some lesions of selected Zoonoses.

c- Professional and practical skills:

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

- c1- Apply the principles of good experimental design and analysis to their own research project.
- c2- Select and perform relevant statistical analysis on data obtained for their own research.
- c.3. Prepare different specimens for various methods of examination and identification for the causative agent producing the disease .

d- General and transferable skills:

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

- d.1. Use library facilities and internet technology.
- d.2. Manage scientific meetings.

Course	Topic	weeks	No. of hours	Lectures	Practical
M-ZOON 198 Role of wild animals in transmission of zoonoses (Lecture: 2 practical: 2 Total: 4)	-Introduction to zoonotic diseases caused by wild animal species.	1,2	8	2	2
	-Role played by wild animals in emerging of zoonoses.	3,4	8	2	2
	-Economic losses caused by zoonotic diseases from wild animals.	5	4	1	1
	-Bacterial Zoonoses transmitted by wild animals	6,7,8 9,10, ,11,12,	28	7	7
	-Identification of Rickettsial Zoonoses	13	4	1	1
	-Reckettisial zoonoses transmitted by wild animals	14,15, 16 17,18	20	5	5
M-ZOON 198 Role of wild animals in transmission of zoonoses (Lecture: 2 practical: 2 Total: 4)	-Viral Zoonoses transmitted by wild animals	19,20, 21,22, 23,24, 25,26	32	8	8
	-Nematodiases transmitted by wild animals	27,28	8	2	2
	-Cestodiases transmitted by wild animals	29,30	8	2	2
	-Trematodiases transmitted by wild animals	31,32	8	2	2
	-Potozoal Zoonoses transmitted by wild animals	33,34	8	2	2
	Mycotic Zoonoses transmitted by wild animals	35	4	1	1
	Control of emerging zoonoses transmitted by wild animals	36	4	1	1
Total			144	36	36

5-Teaching and learning methods

5.1- Lectures using board, data shows and multimedia

5.2- Self learning by preparing essays and presentations on specific titles on rodent borne zoonoses using computer researches and faculty library.



6-Teaching and learning methods for the students with disabilities

- Not applicable.

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	a1, a2,a3,a4	b1, b4,b5		
Practical Exam			c1,c2,c3	
Oral Exam	a5	b2,b3,b6,b7,b8		d1,d2

7.2. Assessment schedules/semester:

Method	Week(s)
Written exams	37 th
Oral Exam	37 th

7.3. Weight of assessments:

Assessment	Weight of assessment
Written exams	50
Practical exam	25
Oral Exam	25
	100

8- List of references

8.1. Notes and books

-Hand outs

8.2. Essential books:

-Understanding zoonotic diseases. (Romich, J.A) Thomson Delmar Learning, Australia, Brazil and USA. 2008.

-Zoonoses, Biology, Clinical Practice, and Public Health Control (Eds Palmer, S.R.; Soulsby, L. and Simpson, D.I.H.) Oxford Univ. Press, Oxford. 1998.

*These books are available in the library of Faculty of Veterinary Medicine, Beni-Suef.

8.3. Recommended books

- Public Health and Preventive Medicine (Eds Robert B. Wallace and Bradley N. Doebbeling) Appleton & Lange A. Simmon & Schuster, USA, 1993.



Beni-Suef University
Faculty of Veterinary Medicine



- Zoonoses (Ed Martin Shakespeare) 2nd Edition, Pharmaceutical Press, London, 2009.

*These books are available in the library of faculty of veterinary medicine.

8.4. Journals, Websites etc

Journals:

Zoonoses and public health

International journal of zoonoses

Vector-borne and zoonotic disease

Global Veterinaria

Journal of food science

Websites:

-<http://www.vetmed.wisc.edu/pbs/zoonoses/>

-<http://www.WHO.int/en/>

-<http://www.CDC.com/>

-<http://www.OIE.com>

Course Coordinators
Dr. Gihan Kamal eldin Abdel-latif

Head of Department
Prof. Dr. Mohamed Ali Ibrahim



B- Matrix alignment of the measured ILOs

Topic	Week	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
-Introduction to zoonotic diseases caused by wild animal species.	1,2	a1, a2, a3	b1,b5,b6	c2	d1,d2
-Role played by wild animals in emerging of zoonoses.	3,4	a1, a2, a3	b1,b5,b6	c2	d1,d2
-Economic losses caused by zoonotic diseases from wild animals.	5	a1, a2, a3	b1,b5,b6	c2	d1,d2
-Bacterial Zoonoses transmitted by wild animals	6,7,8,9,10 11,12	a 1, a 2, a3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
-Identification of Rickettsial Zoonoses	13	a 1,a2,a3	b1,b2,b3,b4,b5,b6	c4	d1,d2
-Reckettsial zoonoses transmitted by wild animals	14,15,16, 17,18	a 1, a 2, a3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
-Viral Zoonoses transmitted by wild animals	19,20,21, 22,23,24, 25,26	a 1, a 2, a 3	b1,b2,b3,b4,b5,b5	c2,c4	d1,d2
-Nematodiasis transmitted by wild animals	27,28	a 1,, a2,a 3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
-Cestodiasis transmitted by wild animals	29,30	a 1, a2,a 3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
-Trematodiasis transmitted by wild animals	31,32	a 1, a2,a 3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
-Potozoal Zoonoses transmitted by wild animals	33,34	a 1, a2,a 3	b1,b2,b3,b4,b5,b6	c2,c4	d1,d2
Mycotic Zoonoses transmitted by wild animals	35	a 1, a2,a 3	b1,b2,b3,b4,b5	c2,c4	d1,d2
Control of emerging zoonoses transmitted by wild animals	36	a1,a5	b6	c1,c2,c3,c 4	d1,d2