Insecticides and Animal Hygiene
(774P)

PhD COURSE SPECIFICATION

A. BASIC INFORMATION

University:	**University of Sadat City**
Faculty:	**Veterinary Medicine**
Program on which the course is given:	**PhD in Veterinary Medical Sciences (Animal and Environment Hygiene)**
Department offering the Course:	**Animal Hygiene and Zoonoses**
Course code:	**774 P**
Course title:	**Insecticides and Animal Hygiene**
Lecture (hour/week):	**2**
Practical (hour/week):	**2**
Course coordinator:	**Prof. Dr. Ahmed Byomi**

B. PROFESSIONAL INFORMATION

1) Overall aims of course

At completion this course, the veterinarian should be able to:

1. Understand the ecosystems and role of pests and disease vectors in existence of hosts and microorganisms.
2. Know the diseases that can be transmitted to animals either mechanically or biologically by pests and disease vectors.
3. Study types of insecticides, characters of ideal insecticide, their modes of action and methods of application.
4. Correlate between application of sanitary measures and protection of animals from the harmful effects of pests and vectors.
5. Understand their possible toxic effects on man and animals, conditions of their uses and correct disposal of their remnants.

2) Intended learning outcomes of course (ILOs)

a) KNOWLEDGE AND UNDERSTANDING

By the end of this course the student should be get a basic knowledge about:-

A.1 outline the basic terms of disease vectors, their types, conditions of their existence and importance in disease control.

A.2 outline the principals of prevention, control and eradication of disease vectors.

A.3 explain the hygienic and economic drawbacks of presence of pests and disease vectors in the environment of animals and birds.

A.4 discuss the different types of insecticides and identifies their conditions of actual use and possible toxicity with the use of the suitable antidote.

A.5 recognize the life cycle of insect vectors and suitable insecticide for eradication either on animals or in their environment.

b) INTELLECTUAL SKILLS

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

B.1- distinguish the different types of insecticides and know their properties.

B.2- interprets a hygienic manner for eradication of insect vectors from the animal enterprise.

B.3- characterize different strategies for prevention, control and eradication of disease vectors.

B.4- examine the responses of the treated animals and how can overcome resistance to insecticides.

C) PROFESSIONAL AND PRACTICAL SKILLS

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

C. 1- Apply methods to describe the role of disease vectors in occurrence and transmission of diseases precisely.

C.2- illustrate effective sanitary measures to reduce animal exposure for disease vectors.

C.3- Apply preventative and control measures for controlling spread of disease vectors.

C.4- determine the economic impact of disease vectors on animal health and production.

C.5- examine symptoms of toxicity, the suitable antidote in case of toxicity or an increased concentration of the insecticides.

D) GENERAL AND TRANSFERABLE SKILL

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

D1-join effectively as part of a team.

D2-handle library facilities and IT tools.

d3-devolop computer / keyboard skills including word

d4- arrange spreadsheets, presentation packages and graph plotting.

3) Topics and contents

Topics (course No.)	Lecture	practical	Total
Common terms and policy of disease control and prevention	8	-	8

Insect vectors biology and their life cycles and Harmful effects and transmitted diseases	20	10	30
Environment, host and insect interaction	10	-	10
control of disease vectors (biological, microbial and chemical)	10	10	20
Hygienic animal housing and Vectorial control strategies.	15	20	35
Sanitation and Characters of an ideal insecticide and classification of insecticides according to their modes of action and their chemical composition.	10	20	30
Methods of application of insecticides and precaution of use Toxicity and insecticide resistance	10	20	30
Combating of contagious diseases epidemiology -sources of infection -Methods of prevention of epidemic diseases. - Hygienic disposal of animal wastes.	10 15	20 8	30 23
Total	**88**	**88**	**176**

4) Teaching and learning methods

4.1. Lectures.
4.2. Practical.
4.3. Self-learning activities.

5) Student assessment

a. METHODS:

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

b. MATRIX ALIGNMENT OF THE MEASURED ILOS/ ASSESSMENTS METHODS:

Assessment Method	K.U (a)	I.S (b)	P.P.S (c)	G.S (d)
Written exam	1,2,3,4,5	1,3,4		-
Practical exam		2	1,2,3,4,5	-
Oral exam	1,2,3,	1,3,4		-
Student activities (assay, seminar, etc.)	1,2,4			**1-4**

c. WEIGHT OF ASSESSMENTS:

Assessment	Allocated Mark	Evidence
Final written exam	**50%**	Marked and signed written paper
Practical exam	**20%**	Marked and signed practical exam paper
Oral exam	**20%**	Signed list of oral exam marks
Student assignments	**10%**	Representative samples of presented materials

6) List of references

6.1.Essential books

1- Cullen, P.T.(2000): Farm Animal Health. A practical Guides, 1st ed.

2- Dewi, A.P.; Axford, R. F. E.; Marai, I. F. M. and Omed, H. (1994): Pollution in Livestock Production Systems. CAB International. Wallingford, UK.

3- Geer, B. K. (1980): Animal Health. A Layman`s guide to disease control. 2nd ed. Interstate printers and Publishers, USA.

4- Gary, N. F. (1994): Drinking water quality, Problems and solutions. Wiley Publishers, UK.

5- Last, A. M. (1983): A Dictionary of Epidemiology**.** Oxford University Press, London

6-Standard Methods for Examination of Water and Waste Water. A.P.H.A. (2005):

Inc., Washington D.C., USA.

Co. Sydney.

7- **Lim, D. V. (1989):** Microbiology. West Publish. Co.St. Paul, USA.

8- Martin, S. W.; Meek, A. H. and Willeberg, P. (1987): Veterinary Epidemiology. Principals and Methods. Iowa State University Press, Ames.

9- North, O. and Bell, D. (1990): Commercial Chicken Production Manual. 4th ed. Chapman & Hall, New York, Ny, USA.

10- Linton, A. H.; Hugo, W. B. and Russell, A. D. (1987): Disinfection in Veterinary and farm animal practice. Blackwell Scientific Publication Ltd.

11- Pepper, I. L.; Gerba, C. P. and Prussea, M. L. (1996): Pollution Science. Academic Press, Inc., California, and USA.

12- Philips, C. J. C. (2001): Principals of Cattle production. CABI Publishing, Wallingford, UK.

6.2. Journals Web sites

- World Poultry Science Journal.
- Journal of Infection and Immunity.
- Journal of Hygiene.
- Journal of Animal Science.
- Journal of Dairy Animal Science.
- Journal of Poultry Science.
- British Poultry Science Journal.
- Journal of Tropical Animal Health and Production.

7) Facilities required for teaching and learning

7.1. Data-show.
7.2. Network for technology transfer.
7.3. Laboratory kits for experiments.
7.4. Computer.

	Course coordinators	Head of department
Name	Prof. Dr. Ahmed Byomi	Prof. Dr. Ahmed Byomi
Signature		

Matrix alignment of course topics and ILOs

Topic	No. of hours /week		Total hours	Hours for lect.	Hours for pract.	ILOs				T&L. methods				
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)	Lect.	Pract.	Self & active leaning	Audio visual	Case study
Common terms and policy of disease control and prevention	**2**	**-**	**8**	**8**		**1,3,4**		**-**	**1**	**+**	**+**			
Insect vectors **and Harmful effects and transmitted diseases**	**2**	**-**	**10**	**10**		**2,5**		**-**	**1,2,**	**+**	**+**			
Environment, host and insect interaction	**2**	**-**	**10**	**10**		**2**	**-**	**-**	**1,2,**	**+**	**+**			
control of disease vectors (biological, microbial and chemical	**2**	**2**	**30**	**10**	**20**	**1,2,5**	**1**	**1,2,3**	**3,4**	**+**	**+**			
Hygienic animal housing and Vectorial control strategies.	**2**	**2**	**50**	**10**	**40**	**2**	**1**	**-**	**,3,4**	**+**	**-**			
Sanitation and Characters of an ideal insecticide	**2**	**-**	**10**	**10**	**20**	**-**	**2,3**	**1,2,3**	**1,2,3,**	**+**	**-**			
Application of insecticide in practical situations	**2**	**2**	**30**	**10**	**20**	**5**	**2,4**	**1,2,3**	**1,**	**+**	**+**			

Combating of contagious diseases epidemiology	**2**	**2**	**28**	**20**	**8**	**1,4,**	**3**	**4,5**	**3,4**	+	+			