



University of Sadat City  
Faculty of Veterinary Medicine  
Dept. of Animal Hygiene and Zoonoses  
(2014-2015)



# Farm Animal Hygiene (Specific courses) (775P)

## 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:	775 P
Course title:	Farm 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:

- Understand the importance of farm animals keeping and maintenance in relation to the modern husbandry techniques.
- Know the Hygienic requirements of farm animals under intensive production systems.

Understand the ecosystems and role of pests and disease vectors in existence of hosts and microorganisms.

### **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 different terms of Hygiene, disinfection, sterilization, veterinary public health and sanitation.

A.2 explain precisely the needs of farm animals according to their age, production and health status.

A.3- Explain fully methods of Protecting farm animals from the risk of diseases, especially infectious diseases and minimizing the exposure of animals to the disease causing agents.

A.4 – explain how to deal with the hygienic problems encountered in farm animal's enterprises.

#### **B) INTELLECTUAL SKILLS**

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

B.1- analyze data about different farm animals kept under intensive production systems.

B.2- detect the requirements of animals from monitoring the health status of animals.

B.3- examine the adaptation of animals to their environment.

B.4- interpret the hygienic problems of animals in relation to their housing conditions.

B.5- explain a strategy for disease prevention, control and eradicate infectious diseases.

B.6- illustrate a preventive strategy against infectious diseases and evaluate the economic effects of diseases.

### **C) PROFESSIONAL AND PRACTICAL SKILLS**

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

- C. 1- illustrate the actual conditions of animal keeping.
- C.2- examine the environmental conditions under which farm animals is reared.
- C.3- handle samples from the affected populations for further investigations to ascertain the hygienic problems.
- C.4- Apply sanitation and decontamination procedures for maintaining farm animals.

### **D) GENERAL AND TRANSFERABLE SKILL**

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

- D1.join effectively as part of a team.
- D2. Handle library facilities and IT tools.
- D3.devop computer / keyboard skills including word.
- D4. arrange spreadsheets, presentation packages and graph plotting

## **3) Topics and contents**

Topics (course No. )	No. of hours		
	Lecture	Tutorial/practical	Total
Common terms and policy of disease control and prevention	10	--	10
<b>Veterinary epidemiology</b> -Uses and types of epidemiological investigations -Patterns of disease occurrence and factors affecting them. - Epidemiological triad and causation of diseases -Routes of infection and modes of transmission.  - counting of disease events	20	20	40
<b>Combating of contagious diseases</b>  -Sources of infection.  - Methods for prevention and eradication of contagious diseases (notification, isolation &	10	--	10

<p>quarantine).</p> <ul style="list-style-type: none"> <li>- Quarantine measures taken on imported animals, birds, their products and by-products.</li> <li>- Hygienic disposal of dead animals and birds.</li> </ul>			
<p><b>Disinfection and disinfectants in Veterinary practice</b></p> <ul style="list-style-type: none"> <li>- Disinfection, sterilization and antisepsis</li> <li>- Physical and chemical means of disinfection</li> <li>- Characters of ideal chemical disinfectants and their modes of action.</li> <li>- Factors affecting the efficiency of disinfectants.</li> <li>- Application of chemical disinfectants in the veterinary practice.</li> <li>- Assessing quality of chemical disinfectants and disinfection.</li> </ul>	10	20	30
<p><b>Air Hygiene and ventilation</b></p> <ul style="list-style-type: none"> <li>- Air composition and hygienic significance.</li> <li>- Air pollution (indoor and outdoor air pollutants) and bioremediation.</li> <li>- Harmful gases inside animal and poultry housing.</li> <li>- Environmental effects on animal health (ambient temperature, humidity, air speed, light).</li> <li>- Ventilation inside animal buildings (natural &amp; artificial).</li> </ul>	10	20	30

<b>Water hygiene</b> - Hygienic significance and global water sources. - Water pollution and its sources. - Hygienic water requirements for animals and birds. - Water –related diseases. - Methods of water treatment (Self purification, mechanical, chemical) - Water hardness (causes, drawbacks and treatment).	10	20	30
<b>Animal housing and disposal of animal manure</b> - Aim of housing and housing requirements under intensive systems of production. - Types of housing cattle (dairy& beef). - Types of housing horses. - Sheep and goat housing. - Hygienic Problems arising inside animal houses - Hygienic disposal of animal manure.	10	--	10
<b>Eradication of external parasites</b> - Hygienic and economic effects of ectoparasitic infestation on animals and poultry - Vectorial control of insects. - Control of ticks, mites, lice and flies.	8	8	16

- The use of insecticides and their harmful effects.			
<b>Total</b>	<b>88</b>	<b>88</b>	<b>176</b>

#### 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	1,3,4,5,6		-
Practical exam		2	1,2,3,4	-
Oral exam	1,2,3	1,3,4		-
Student activities (assay, seminar, etc.)	1			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

##### 6.1.Essential books

1- Cullen, P.T.(2000): Farm Animal Health. A practical Guides, 1<sup>st</sup> 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. 2<sup>nd</sup> 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. 4<sup>th</sup> 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.

	<b>Course coordinators</b>	<b>Head of department</b>
<b>Name</b>	Prof. Dr. Ahmed Byomi	Prof. Dr. Ahmed Byomi
<b>Signature</b>		



### 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)	LS (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	-	10	10		1	1	-	1	+	-			
Epidemiology	2	2	40	20	20	2	2	2,3	1,2,	+	+			
Combating of contagious diseases	2	-	10	10		3,4	1	-	1,2,	+	-			
Disinfection and disinfectants in Veterinary practice	2	2	30	10	20	3	5,6	4	3,4	+	+			
Air Hygiene and pollution	2	2	30	10	20	1,2,3	1	1,4	,3,4	+	+			
Water hygiene	2	2	30	10	20	2,3	1,4	2,3	1,2,3,	+	+			
Animal housing and disposal of animal manure	2	-	10	10		2,4	2,3	-	1,	+	-			
Eradication of external parasites	2	2	28	20	8	2,3,4	4	2	3,4	+	+			

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Head of Department: Prof. Dr. Ahmed M. Byomi

