Course Specifications

(Animal, Poultry and Environmental Hygiene 1)

Benha University **Faculty of Veterinary Medicine**

Programme on which the course is given: **Bachelor of Veterinary medical Sciences**

Department offering the course: **Department of Hygiene, Animal Behavior and Management**

Academic year/level : 5th Year

Date of specification approval: Ministerial decree No. 921 on 15/ 9/ 1987 (approved in this template by the Department Council on 3/10/2009)

A- Basic Information

Title: Animal, Poultry and Environmental Hygiene (1) **Code**: Vet00655a

Lecture: 3 hours/week

Practical: 4 hours/week **Total**: 7 hours/week

B- Professional Information

1- Overall aim of the course is to :

a. Provide the students with an advanced education in the field of farm animal housing and hygienic measures to provide dairy and beef cattle, in addition to horse, sheep and goat with their maximum requirements for efficient production under different field and environmental conditions.

b. Highlight the importance of hygienic measures of the farms and general principles for efficient ventilation of animal buildings.

c. Provide the students with an overview on air, water and soil pollutants and the expected influence of pollution on animals and measures to manage sources of pollution inside animal farms.

2 Intended learning outcomes of course (ILOs) :

a-Knowledge and understanding :

After successful completion of the course, the students should be able to:

a.1). Describe and illustrate different types of animal housing

a.2). Mention the general principles for designing dairy, beef, sheep and goat farms.

a.3). List and explain different ventilation systems used for different types of animal housing

a.4).Mention different methods for hygienic disposal of animal manure.

a.5). Define and classify air, water and soil pollutants and their influence on animal health.

a.6). Identify general and specific epidemiology pattern of animal population diseases and the most effective immunization protocols.

a.7) recognize the accurate measurement of veterinary quarantine.

b-Intellectual skills :

After successful completion of the course, the students should be able to:

b.1). Choose the appropriate system of housing and design according to type of production and environmental requirements

b.2). Plan a general layout of commercial animal farms

b.3).Interpret different types of pollutants in air, drinking water and soil inside and outside the animal building.

b.4).Compare between different methods for collection, treatment and disposal of animal manure and choose the suitable method for different animal premises.

c-Professional and practical skills :

After successful completion of the course, the students should be able to:

c.1. Take representative samples from air, water source and soil for laboratory examination.

c.2. Perform simple chemical tests to judge air and water quality.

c.3). Employ all the gained knowledge and understanding in clinical practice in a skillful pattern.

c.4). safely, correctly and humanely restrain animals for examination.

c.5). obtain the history of the case whether it is of an individual animal or a group of animals.

c.6). conduct evidence based problems solving of field presented problems tasks.

c.7) provide emergency care to all species of animals.

c.8) utilize appropriate safety procedures to protect clients and co-workers.

c.9) correctly deal with procedure related to public health issues, notifiable diseases and disposal of animal wastes.

c.10) minimize the risk of contamination, cross infection and predisposing factors of disease.

c.11) solve the different housing disorder or environment stress in hourse, cattle, buffalo, sheep, goats and poultry house.

d-General and transferable skills :

After successful completion of the course, the students should be able to:

d.1.work under pressure and or / contradictory conditions.

d.2. utilize computer and Internet to search for information

d.3. communicate verbally and non verball with lectures and class-mates

d.4. conduct research papers and project.

D.5. function in a multidisciplinary team during conducting a research paper and during laboratory work.

d.6. search about new information.

3- Contents :

Topic	**No. of hours**	**Lecture**	**Practical**
Animal housing			
1-General requirements for animal housing	5	5	-
2-Ventilation	3	3	-
3-Drainage system	2	2	-
4-Housing of dairy herds	5	5	-
5-Housing of beef cattle	3	3	-
6-Housing to sheep	1	1	-
7-Housing to goat	1	1	-
8-Housing to horse	2	2	-
9-Biosecurity (general)	1	1	-
10-Design of animal farms	12	-	12
Environmental Hygiene			

12-Normal constituents of air	1	1	-
13-Chemical pollutants and animal health	16	4	12
14-Biological pollutants and animal health	5	1	4
15-Temperature, humidity, air movement and solar radiation	11	3	8
16-Normal constituents of drinking water	1	1	-
17-Sources of drinking water	1	1	-
18-Chemical pollutants and animal health	16	4	12
19-Biological pollutants and water related diseases	6	2	4
20-Treatment of water hardness	6	2	4
21-Water sanitizers and treatment of drinking water	7	3	4
22-Treatment of animal manure	4	4	-
Total	**105**	**45**	**60**

Content	**ILOs**			
	Knowledge and understanding	**intellectual**	**Professional and practical**	**General and transferabl**
1-General requirements for animal housing	**a.1**	**b.1**	**c.11**	**d.1,2,3,4,5,6**
2-Ventilation	**a.3**	**b.1**	**c.11**	**d.1,2,3,4,5,6**
3-Drainage system	**a.4**	**b.4**	**c.11**	**d.1,2,3,4,5,6**
4-Housing of dairy herds	**a.2**	**-**	**c.11**	**d.1,2,3,4,5,6**
5-Housing of beef cattle	**a.2**	**-**	**c.11**	**d.1,2,3,4,5,6**
6-Housing to sheep	**a.2**	**-**	**c.11**	**d.1,2,3,4,5,6**
7-Housing to goat	**a.2**	**-**	**c.11**	**d.1,2,3,4,5,6**
8-Housing to horse	**-**	**-**	**c.11**	**d.1,2,3,4,5,6**
9-Biosecurity (general)	**a.7**	**-**	**c.11**	**d.1,2,3,4,5,6**
10-Design of animal farms	**-**	**b.2**	**c.11**	**d.1,2,3,4,5,6**

11-Normal constituents of air	**a.5**	**-**	**c.1,2**	**d.1,2,3,4,5,6**
12-Chemical pollutants and animal health	**a.5**	**b.3**	**C.1,2**	**d.1,2,3,4,5,6**
13-Biological pollutants and animal health	**a.5**	**b.3**	**c.1,1**	**d.1,2,3,4,5,6**
14-Temperature, humidity, air movement and solar radiation	**a.5**	**b.3**	**C.11**	**d.1,2,3,4,5,6**
15-Normal constituents of drinking water	**a.5**	**b.3**	**c.1,2**	**d.1,2,3,4,5,6**
16-Sources of drinking water	**a.5**	**b.3**	**c.1,2**	**d.1,2,3,4,5,6**
17-Chemical pollutants and animal health	**a.5**	**b.3**	**c.1,2**	**d.1,2,3,4,5,6**
18-Biological pollutants and water related diseases	**a.5**	**b.3**	**c.1,2**	**d.1,2,3,4,5,6**
19-Treatment of water hardness	**a.5**	**-**	**c.10**	**d.1,2,3,4,5,6**
20-Water sanitizers and treatment of drinking water	**a.5**	**-**	**c.10**	**d.1,2,3,4,5,6**
21-Treatment of animal manure	**a.5**	**b.4**	**c.10**	**d.1,2,3,4,5,6**

4- Teaching and learning methods :

4.1. Lectures using data show in addition to the white board.

4.2. Demonstration of instruments used for determination of air and water quality inside the animal buildings.

4.3. Using the laboratory to perform simple chemical detection and determination of different pollutants in air and water samples.

4.4. farm visit to identified animal house design.

5- Student assessment methods :

5.1. Practical exam.(final term) to assess professional and practical skills

5.2.Oral exam. (final term) to assess knowledge, information and intellectual skills

5.3.Written exam. (final term) to assess knowledge, information and intellectual skills

5.4. Semester work including quiz, written exams, essay and/or assignment to design suitable housing for farm animals to assess knowledge, intellectual and general skill.

Assessment schedule :

Assessment 1	Practical examination	Week 13
Assessment 2	Oral examination	Week 15
Assessment 3	Written examination	Week 15
Assessment 4	Semester work	Week 4, 8, 12

Weighting of assessments:

Final- term examination	50	%
Oral examination	20	%
Practical examination	20	%
Semester Work	10	%
Other types of assessment	0	%
Total	**100**	**%**

6- List of references :

6.1. Essential books (text books)

- Veterinary Hygiene (1921): R.G. Linton, W. Green and Sons, LTD Ediburgh.

- Livestock health and Housing (1982): David Sainsbury and peter Sainsbury and peter Sainsbury. Butler and tanner LTD, Frome and London.
- Pollution in Livestock production systems (1994): I.A.P. Dewi, R.F.E. Axford, I. Fayez M. Marai and H. Omed. CAB International. UK.

6.3. Recommended books

- Animal Welfare (1989): Mahmoud A. Metwally, Zagazig University.
- Farm animal health (1991): Patrick T. Cullen, Pregamon Press. PLC. UK.
- Farm animal and the environment (1992): Clive Philips and David Piggs. CAB International. UK.

7- Facilities required for teaching and learning

- Laboratory .
- Chemical kits for detection and estimation of air and water pollutants
- Instruments used for air sampling and detection of some pollutant, in addition to those used for determination of air temperature, humidity and air velocity.
- Data- show and computer lab.

8- periodicals web sites,….ect:

1- www.cdc.org.

2- www.oie.int.

3-www.ukagriculture.com.

Course coordinators :

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