

## Specification for Animal, Poultry and Environmental Hygiene course 2019/2020

### A-Affiliation

1.	Relevant program	Bachelor of Veterinary Medical Science (B.V.M.Sc)
2.	Department offering the course	Animal hygiene and veterinary Management

**Date of specification approval:** ministerial decree No. 1727 on 26/4/2017  
(Approved in this template by the department council on 1/10/2019)

### B-Basic information

1.	Course title	Animal, Poultry and Environmental Hygiene
2.	Course code	407 (A) I
3.	Level	4 <sup>th</sup> year
4.	Semester	First term
5.	Total hours/week	5
6.	Lecture hours/week	2
7.	Practical hours/week	3

### C-Professional Information

#### 1- Course learning objectives

- 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.
- Highlight the importance of hygienic measures of the farms and general principles for efficient ventilation of animal buildings.
- 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 the course (ILOs):

##### a- Knowledge and understanding

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

- 1). Describe and illustrate different types of animal housing
- 2). Mention the general principles for designing dairy, beef, sheep, goat and horse farms.
- 3). List and explain different ventilation systems used for different types of animal housing
- 4). Mention different methods for hygienic disposal of animal manure
- 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) Describe 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 horse, cattle, buffalo, sheep, goats and poultry house

#### **d- General and transferable skills**

After successful completion of the course the students should have the following skills

- d1- Work under pressure and / or contradictory condition in contain codes
- d2- Communicate verbally and non-verbal with lecturers and class-mates
- d3- Function in a multidisciplinary team during conducting a research paper.
- d4- Search skill.
- d5- Interact with other graduates all over the world.
- d6- presentation skill.

### 3- Course contribution in the program ILOs:

Course ILOS	Program ILOS
A <b>Knowledge and understanding</b>	a <sup>12,13</sup>
B <b>Intellectual skills</b>	b <sup>11,13</sup>
C <b>Professional and practical skills</b>	c <sup>12</sup>
D <b>General and transferable skills</b>	d <sup>1,2,3,5,6</sup>

#### 3.1- Course contents:

Topic	Lecture hours	Practical hours
1-General requirements for animal housing	4	-
2-Ventilation	2	-
3-Drainage system		-
4-Housing of dairy herds	2	-
5-Housing of beef cattle	2	-
6-Housing to sheep	4	-
7-Housing to goat		-
8-Housing to horse	2	-
9-Biosecurity (general)		-
10-Design of animal farms	-	9
Environmental Hygiene		
11-Normal constituents of air	4	-
12-Chemical pollutants and animal health		9
13-Biological pollutants and animal health		6
14-Temperature, humidity, air movement and solar radiation	2	3
15-Normal constituents of drinking water	2	-
16-Sources of drinking water		-
17-Chemical pollutants and animal health	2	9
18-Biological pollutants and water related diseases	2	3
19-Treatment of water hardness	2	3
20-Water sanitizers and treatment of drinking water		3
21-Treatment of animal manure		
<b>Total</b>	<b>30</b>	<b>45</b>

**The midterm and practical exams are included during the semester**

#### 3.2- ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills

1-General requirements for animal housing	<b>a1, a2, a3, a4, a5, a6</b>	-	-	d1
2-Ventilation	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2	d2 to d6
3-Drainage system	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2,c3,c4,c5,c6,c7 ,c8,c9,c10,c11	d2 to d6
4-Housing of dairy herds	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2,c3,c4,c5,c6,c7 ,c8,c9,c10,c11	d2 to d6
5-Housing of beef cattle	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c5,c6,c7,c8,c9,c10,c11,c12	d2 to d6
6-Housing to sheep	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2,c3,c4,c5,c6,c7 ,c8,c9,c10,c11	d2 to d6
7-Housing to goat	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2,c3,c4,c5,c6,c7 ,c8,c9,c10,c11	d2 to d6
8-Housing to horse	<b>a1, a2, a3, a4, a5, a6</b>	<b>b1, b2, b3,b4,</b>	c1,c2,c3,c4,c5,c6,c7 ,c8,c9,c10,c11	d2 to d6
9-Biosecurity (general)	<b>a1, a2, a3, a4, a5, a6</b>	<b>b3,b4,</b>	c3,c4	d2 to d6
10-Design of animal farms	<b>a1, a2, a3, a4, a5, a6</b>	<b>b3,b4,</b>	-	d2 to d6
11-Normal constituents of air	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
12-Chemical pollutants and animal health	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
13-Biological pollutants and animal health	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
14-Temperature, humidity, air movement and solar radiation	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
15-Normal constituents of drinking water	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
16-Sources of drinking water	<b>, a3, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
17-Chemical pollutants and animal health	<b>, a3, a4, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
18-Biological pollutants and water related diseases	<b>, a3, a4, a5</b>	<b>b3,b4,</b>	c3,c4,c5,c6,	d2 to d6
19-Treatment of water hardness	<b>a4, a5, a6</b>	<b>b3,b4,</b>	c7,c8,c9,c10,c11	d2 to d6

20-Water sanitizers and treatment of drinking water	a4, a5, a6	,b4,	c7,c8,c9,c10,c11	d2 to d6
21-Treatment of animal manure	a4, a5, a6	,b4,	c7,c8,c9,c10,c11	d2 to d6

#### 4- Teaching, learning and assessment methods:

ILOs	Teaching and Learning methods								assessment method				
	L	P&M	D&S	P	Ps	Bs	I	semester	midterm	oral	practical	written	
Knowledge and understanding	a1	X	X	X	0	0	X	0	X	X	X	0	X
	a2	X	X	X	0	0	X	0	X	X	X	0	X
	a3	X	X	X	0	0	X	X	X	X	X	0	X
	a4	X	X	X	0	0	X	X	X	X	X	0	X
	a5	X	X	X	0	0	X	X	X	0	X	0	X
	a6	X	X	X	0	0	X	X	X	0	X	0	X
	a7	X	X	X	0	0	X	X	X	0	X	0	X
Intellectual skills	b1	X	X	X	0	X	X	X	X	X	X	0	X
	b2	X	X	X	0	X	X	X	X	X	X	0	X
	b3	X	X	X	0	X	X	X	X	X	X	0	X
	b4	X	X	X	0	X	X	X	X	X	X	0	X
Professional and practical skills	c1	0	X	0	X	X	X	X	X	0	X	X	0
	c2	0	X	0	X	X	X	X	X	0	X	X	0
	c3	0	X	0	X	X	X	X	X	0	X	X	0
	c4	0	X	0	X	X	X	X	X	0	X	X	0
	c5	0	X	0	X	X	X	X	X	0	X	X	0
	c6	0	X	0	X	X	X	X	X	0	X	X	0
	c7	0	X	0	X	X	X	X	X	0	X	X	0
	c8	0	X	0	X	X	X	X	X	0	X	X	0
	c9	0	X	0	X	X	X	X	X	0	X	X	0
	c10	0	X	0	X	X	X	X	X	0	X	X	0
	c11	0	X	0	X	X	X	X	X	0	X	X	0
General skills	d1	X	0	0	0	0	0	0	X	0	X	0	X
	d2	X	0	0	X	0	0	0	X	0	X	0	X
	d3	X	X	0	X	0	0	0	X	0	X	0	X
	d4	X	X	X	0	0	0	0	X	0	X	0	X
	d5		0	0	0	0	0	0	X	0	X	0	X
	d6		X	0	0	X	0	0	X	0	X	0	X

L :Lecture, P&M: Presentations & Movies, D&S: Discussions & Seminars PT: Practical training, Ps: Problem solving, Bs: Brain storming, I:imagination

#### 5- Assessment timing and grading:

Assessment method	timing	grade
Mid-term exam and semester work	6 <sup>th</sup> week	15
Practical exam	14 <sup>th</sup> week	20

oral exam	End of semester	15
Written exam	End of semester	50
total		100

## **6- List of references**

### **6.1- Course notes:**

A concise guide of animal and poultry hygiene edited by staff members

### **6.2- Essential books (text books)**

- Andres Aland (2013) Livestock Housing
- P.K. Goel. (2009) Water Pollution
- Frank R. Theroux (2008) laboratory manual for chemical and bacterial analysis of water and sewage

### **6.3- Recommended books**

- Course note
- Andres Aland (2013) Livestock Housing.
- Frank R. Theroux (2008) laboratory manual for chemical and bacterial analysis of water and sewage.

### **6.4- Periodicals, Web sites, . . . etc**

- Veterinary Records.
- Benha veterinary medical journal
- [www.OIE.int.org](http://www.OIE.int.org)
- [www.WHO.int.org](http://www.WHO.int.org)
- [www.cdc.org](http://www.cdc.org)
- [www.ekb.eg](http://www.ekb.eg)

## **7- Facilities required for teaching and learning**

- Teaching hall (Data show and White board)
- Equipped Department laboratory (Instruments used for air sampling and detection of some pollutant, in addition to those used for determination of air temperature, humidity and air velocity)
- Farm animal education
- Laboratory animal unit.

**Course coordinator: Prof Dr. MONA ASHOUB**

**Head of department Prof Dr. SAEED EL-LITHY**

Signature ..... Date 1/10/2019