Specification for Animal, poultry, fish Hygiene and Environment (B)

2025/2026

1-Basic information

Course title	Animal, poultry, fish Hygiene and Environment (B)							
Course code	**HVC.425**							
Department/s participating in delivery of the course	veterinary hygiene and management							
Number of units/credit hours	**Theoretical**	**2**	**Practical**	**1(2)**	**Other**	**0**	**Total**	**3(4)**
Course Type	√ **Obligatory** **Elective**							
Academic level at which the course is taught	4th year							
Semester	Spring							
Academic program	Bachelor of Veterinary Medicine (BVM)							
Faculty	Veterinary medicine							
University	Benha University							
Name of course coordinator	Prof. Dr. Yasser Metawea							
Course Specification Approval Date	Faculty council on 27/8/2025							
Course Specification Approval (Attach the decision/minutes of the department /committee/council ....)	Department council 8/7/2025							

2-Course overview

- **Course contents written in the program bylaw:**

Control of contagious diseases; Eradiciation of external parasites; transportation of animals; Disposal and utilization of animal & poultry wastes; biosecurity; stress and animal health; fish farming and aquanculture hygiene.

3- Course Learning Outcomes CLOs

	(NARS) outcomes		Course outcomes	
	Code	**Text**	**Code**	**Text**
	2.9	General and specific epidemiological pattern of animal population diseases and the most effective	**a1**	Describe and illustrate poultry housing.
			a2	Mention the general principles for designing poultry farms.
			a3	List and explain different principles of

Knowledge and understanding		immunization protocols		biosecurity
			a4	Mention different methods for Disinfection of animal buildings
			a5	Define and classify the insecticides and eradication of skin parasites.
			a6	Identify general and specific epidemiology pattern of animal population diseases and the most effective immunization protocols.
			a4	Mention different methods for Disinfection of animal buildings
			a5	Define and classify the insecticides and eradication of skin parasites.
	2.12	The accurate measurements of veterinary quarantine	**a7**	Describe the accurate measurement of veterinary quarantine
Intellectual skills	**4.2**	Assess and criticize, at the fundamental level, how data are derived.	**b1**	Choose the appropriate system of housing and design according to type of production and environmental requirements
			b2	Plan a general layout of commercial poultry farms
			b3	Interpret different types of disinfectants and insecticides
			b4	Compare between different methods for disinfection of buildings
Professional and practical skills	**3.11**	Utilize appropriate safety procedures to protect clients and co-workers.	**c8**	Utilize appropriate safety procedures to protect clients and co-workers.
	3.12	Correctly deal with procedures related to food hygiene, public health issues, notifiable diseases and disposal of animal wastes	**c1**	Take representative samples from poultry houses for laboratory examination.
			c2	Perform monitoring system to improve poultry farms
			c3	Employ all the gained knowledge and understanding in clinical practice in a skillful pattern.
			c4	safely, correctly and humanely restrain animals for examination.
			c5	obtain the history of the case whether it is of an individual animal or a group of animals
			c6	conduct evidence based problems solving of field presented problems tasks.
			c7	Provide emergency care to all species of animals.

			c9	correctly deal with procedure related to public health issues and notifiable diseases
	3.13	Minimize the risk of contamination, cross infection and predisposing factors of diseases.	**c10**	minimize the risk of contamination, cross infection and predisposing factors
General and transferable skills	**5.1**	Work under pressure and / or contradictory conditions	**d1**	Work under pressure during Animal , poultry, fish Hygiene and Environment lab session.
	5.2	Function in a multidisciplinary team	**d2**	Work in a team during the diagnosis process.
	5.3	Communicate appropriately verbally and nonverbally	**d3**	Communicate & Cooperate with other colleagues for reaching diagnosis.
	5.4	Organize and control tasks and resources.	**d4**	Manipulate and organize tasks in the field of Animal, poultry, fish Hygiene and Environment.
	5.5	Search for new information and technology as well as adopt life–long self-learning ethics	**d5**	Search for new information in the field of Animal, poultry, fish Hygiene and Environment.

4- Teaching and learning methods					
Lectures	√	**Discussion & seminar (self-learning)**	√	**Practical**	√
Presentation & movies	√	**Problem solving**	√	**Brain storming**	√
Others	**Field training**				

- Course Schedule:

Number of the Week	**Scientific content of the course (Course Topics)**	**Total Weekly Hours**	**Expected number of the Learning Hours**			
			Theoretical teaching (lectures/discussion groups/ .....)	**Training (Practical/Clinical/ .....)**	**Self-learning (Tasks/ Assignments/ Projects/ ...)**	**Other (to be determined)**
W1	General requirements for poultry housing	**3(4)**	**2**	**1(3)**		**0**
W2	biosecurity	**3(4)**	**2**	**1(3)**		**0**

W3	Types of disinfectants	**3(4)**	**2**	**1(3)**	**Formative quiz(self-learning)**	**0**
W4	Disinfection of animal house	**3(4)**	**2**	**1(3)**		**0**
W5	Classify of insecticides	**3(4)**	**2**	**1(3)**		**0**
W6	Eradication of ectoparasites	**3(4)**	**2**	**1(3)**	**Formative quiz(self-learning)**	**0**
W7	**Semester works (one hour exam)**					
W8	Environmental stressors	**3(4)**	**2**	**1(3)**		**0**
W9	Common terms, Epidemiological invistigstion and etiological agent	**3(4)**	**2**	**1(3)**		**0**
W10	Disease transmission	**3(4)**	**2**	**1(3)**	**Formative quiz(self-learning)**	**0**
W11	animal welfare	**3(4)**	**2**	**1(3)**		**0**
W12	Surveillance, Risk analysis and Notification	**3(4)**	**2**	**1(3)**		**0**
W13	Qarantine and Hygienic disposal of carcass	**3(4)**	**2**	**1(3)**		**0**
W14	-prevention and control of contagious diseases	**3(4)**	**2**	**1(3)**	**Formative quiz(self-learning)**	**0**
W15	**Practical exam**					

5- Methods of students' assessment

a- Assessment methods (summative and formative)

1. **Formative assessment**: including (weekly quizzes, homework assignments and surveys).
2. **Summative assessment** including (quizzes, class activities, Mid-term exam, practical exam, oral exams and final written exams).

b- Assessment schedule and weight

Assessment method	Assessment Timing (Week Number)	Marks/ Scores	Percent
Semester work including one hour	7^{th} week	10	10%

exam			
Assignments / Project /Portfolio/ Logbook	Throughout semester		
Field training			
Formative assessment	Throughout semester	-	-
Practical exam	15th week	30	30%
oral exam	End of semester	10	10%
Written exam	End of semester	50	50%
Total		100	100%

6- Learning resources and supportive facilities:

Learning resources	Main reference	**Student handbook**: A concise guide of animal and poultry hygiene edited by staff members Edit by Staff members
	Essential books (textbooks)	• 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
	Periodicals, Web sites, . . . etc	• Veterinary Records. • Benha veterinary medical journal • www.OIE.int.org • www.WHO.int.org • www.cdc.org • www.ekb.eg
	Learning platform	Thinqi
Supportive facilities	Devices & instruments	**Devices** a. microscope b. PH meter c. Autoclave d. Hot air oven e. Vortex mixer f. Distiller g. Centrifuge h. Sterilization oven i. Water bath j. Anometer k. Thermo-hygrometer
		1- Teaching hall (Data show and White board) 2- Equipped Department laboratory (Instruments used for

		air sampling and detection of some pollutants, in addition to those used for determination of air temperature, humidity and air velocity) 3- Farm animal education 4- Laboratory animal unit.

Matrices:

A- Content and ILOs matrix:

Topic	A) Knowledge and understanding	B) Intellectual skills	C) Professional and practical skills	D) General and transferable skills
1-General requirements for poultry housing	a1, a2, a3, a4, a5, a6	-	-	d1
2-Biosecurity	a1, a2, a3, a4, a5, a6	b1, b2, b3,b4	c1,c2	d2 ,d3,d4,d5
3-Types of disinfectant	a1, a2, a3, a4, a5, a6	b1, b2, b3,b4	c1,c2,c3,c4,c5,c6,c7,c8,c9,c10	d2 ,d3,d5
4- Disinfection of animal buildings	a1, a2, a3, a4, a5, a6	b1, b2, b3,b4	c1,c2,c3,c4,c5,c6,c7,c8,c9,c10	d2 ,d3,d5
5-Classify of insecticides	a1, a2, a3, a4, a5, a6	b1, b2, b3,b4	c5,c6,c7,c8,c9,c10	d2 ,d3,d5
6-Eradication of ectoparasites	a1, a2, a3, a4, a5, a7	b1, b2, b3,b4	c1,c2,c3,c4,c5,c6,c7,c8,c9,c10	d2 ,d3,d5
7-Environmental stressors	a1, a2, a3, a4, a5, a7	b1, b2, b3,b4	c1,c2,c3,c4,c5,c6,c7,c8,c9,c10	d2 ,d3,d5
8-animal walfare	a1, a2, a3, a4, a5, a7	b1, b2, b3,b4	c1,c2,c3,c4,c5,c6,c7,c8,c9,c10	d2 ,d3,d5
9- Common terms	a1, a2, a3, a4, a5, a6	b3,b4	c3,c4	d2 ,d3,d5
10- Disease transmission	a1, a2, a3, a4, a5, a6	b3,b4	-	d2 ,d3,d5
11- Surveillance	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5
12- Notification	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5
13- Qarantine	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5
14- Hygienic disposal of	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5

carcass				
15- Epidemiological invistigstion	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5
16- etiological agents	a3, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d5
17- Risk analysis	a3, a4, a5	b3,b4	c3,c4,c5,c6,	d2 ,d3,d4,d5
18- Prevention and control of contagious disease	a4, a5, a6	b4	c7,c8,c9,c10	d2 ,d3,d4,d5

B- Teaching and learning methods and ILOs matrix:

ILOs		Teaching and Learning method						
		L	P&M	D&S	P(TPL)	Ps	Bs	FTP
Knowledge and understanding	a1	√	√	√		√	√	
	a2	√	√	√		√	√	
	a3	√	√	√		√	√	
	a4	√	√	√		√	√	
	a5	√	√	√		√	√	
	a6	√	√	√		√	√	
	a7	√	√	√		√	√	
Intellectual skills	b1	√		√			√	√
	b2	√		√			√	√
	b3	√		√			√	√
	b4	√		√			√	√
Professional and practical skills	c1				√		√	√
	c2				√		√	√
	c3							
	c4				√		√	√
	c5				√		√	√
	c6							
	c7				√		√	√
	c8							
	c9				√		√	√
	c10				√		√	√
General skills	d1							√
	d2						√	√
	d3						√	√
	d4						√	√
	d5		√	√		√		√

L: Lecture**, P&M:** Presentations & Movies**, D&S:** Discussions & Seminars (self-learning), **P(TPL):** Practical, **Ps:** Problem solving, **Bs:** Brain storming**, FTP:** field trip, Training, Project

C- Assessment methods and ILOs matrix:

ILOs		assessment method				
		Formative assessment	Semester works (one hour exam)	Oral	Practical	Written
Knowledge and understanding	a1	√	√	√		√
	a2	√	√	√		√
	a3	√	√	√		√
	a4	√	√	√		√
	a5	√	√	√		√
	a6	√	√	√		√
	a7	√	√	√		√
Intellectual skills	b1	√	√	√		√
	b2	√	√	√		√
	b3	√	√	√		√
	b4	√	√	√		√
Professional and practical skills	c1	√			√	
	c2	√			√	
	c3	√			√	
	c4	√			√	
	c5	√			√	
	c6	√			√	
	c7	√			√	
	c8	√			√	
	c9	√			√	
	c10	√			√	
General skills	d1	√	√			
	d2	√	√			
	d3	√	√	√		
	d4	√	√			
	d5	√	√			

Name and Signature Course Coordinator	Name and Signature Program Coordinator
Prof. dr. Yasser Metawea	**Prof. Dr. Mahmoud Abouelroos**