Course specification
2017-2018

1-Basic information

Course Code:	**S5-ANHG**
Course title :	Animal, Poultry and Environmental hygiene
Academic year:	**5th academic Year**
Program title:	B. Sc. Veterinary Medical sciences
Contact hours/ week	**5 hours/week, (3 Lect./week, 2 Practical/week)**
Approval Date	

1-Professional information

Overall aims of course:

This course aims to:

1- Provide students with basic knowledge about the animal's environment, main components and its effect on animal health, productivity and human health; the relationship between climatic changes and diseases occurrence subsequently predict the effects of climatic changes on animal health and production and to identify the role of veterinarian in maintaining and improving a high level of public health and food safety besides conclude that proactive measures " Disease Prevention " is better and economical than cure.

a- Intended learning outcomes of course (ILOs)

a.1. Knowledge and understanding:

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

a.1.1. Recognize the main components of an animal's environment and its effect on animal health and productivity.

a.1.2. Describe livestock problems relating to their environment (air, water, and soil).

a.1.3. Illustrate the housing requirements for specific categories of livestock animals and birds.

a.1.4. List the general concepts and principles of veterinary epidemiology & uses.

a.1.5. mention the principles of prevention and control of contagious diseases .

a.1.6. Recognize the general measures for prevention and control of external parasites.

a.1.7. Set and describe risk factors common to an aquaculture operation in addition to Principles of biosecurity measures in fish farms.

a.1.8. Recall the consequences of poor hygiene and different methods of disinfection process.

a.1.9. Mention the causes, stages of stress and its measurable effect on animal health.

a.1.10. Understand the quarantine regulation for imported and exported animal for different purpose such as breeding or slaughtering in addition to animals byproduct.

a.1.11. Summarize the different methods of hygienic disposal of animal wastes.

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a.2. Intellectual skills

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

a.2.1. Able to interpret the measurable effect of environmental climatic changes, soil pollution, animal wastes and environmental stressors on animal health and productivity in addition to quarantine regulation for imported and exportation of animals and animal byproducts.

a.2.2. Interpret the hygienic quality of water intended for animal drinking.

a.2.3. Compare between different systems for housing of livestock ,birds and aquaculture.

a.2.4. Analyze and interpret of field data, diagnostic test results in animal health. Existing. survey and surveillance systems and their application in risk analysis process.

a.2.5. formulate the measures applied for prevention and control of contagious diseases.

a.2.6. Evaluate different methods for disinfection, hygienic disposal of animal wastes and control of external parasites of veterinary importance.

a.2.7. Solving environmental problems in aquaculture.

a.3. Professional and practical skills

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

a.3.1. Measure and monitor of some gaseous and biological impurities in stable air.

a.3.2. Carry out complete examination of water sources, water sample and soil samples with reports.

a.3.3. Implement and interpret using nanotechnology in water purification and removal of bacterial contaminants.

a.3.4. Apply a new technology for hygienic disposal and treatment of animal wastes.

a.3.5. Planning animal farms in accordance to biosecurity and environmental needs .

a.3.6. Acquire basic epidemiological skills; they will learn to apply epidemiologic tools in animal disease surveillance/survey systems in order to conduct valid risk analyses.

a.3.7. design a plan for mitigation of environmental stressors, prevention and control of contagious and zoonotic diseases.

a.3. 8. Perform control of external parasites affecting livestock.

a. 3.9. Measure and monitor the environmental problems for aquaculture.

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a.4. General and transferable skills

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

a.4.1 Utilize new technological tools.

a.4.2 Work in group.

a.4.3 Able to communicate with specialists.

a.4.4 Participate in private business.

a.4.5. Communicate effectively with researchers from different disciplinary backgrounds and Communicate effectively with other people with an interest in human and animal health, including the general public and key policy makers.

2-Topics and contents

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Course	Topic	Total (hr)	Lectures	Practical
5th year- Course Title: Environmental Hygiene (Lec. 3 h./week, Pract. 2h./week) first semester	1-Introduction	4	2	2
	2-Air Hygiene	14	6	8
	3-Water Hygiene includes using nanotechnology in water purification	14	8	6
	4-Soil Hygiene	4	2	2
	5- Disposal of Animal wastes	4	2	2
	6-Stress and animal health	4	4	-
	7-Housing of animals: (Introduction, Equines , Cattle, sheep,, poultry)	12	12	-
	8- Poultry hygiene	3	3	-
5th academic year Course Title: Preventive Medicine (Lec. 3h./week, Pract. 2h./week) 2nd semestre	9- Case study and farm visit	6	-	6
	Total	**65**	**39**	**26 h**
	Second semestre (Preventive Medicine)			
	1) Epidemiology (Introduction, Uses, Basic epidemic theory, Epidemic curve, Outbreak investigation, Eradication.	17	9	8
	2) Control of contagious diseases	6	6	-
	3) Disinfection of livestock farms	11	3	8
	4) Biosecurity	6	6	-
	5) Control of external parasites in livestock farms	9	6	3
	6) Aquaculture hygiene	6	6	-
	7) Hygienic disposal of animal mortalities	4	3	1
	8) Case report & Visit	6	-	6
	Total	65	39	26

3-Teaching and learning methods

3.1. Lectures (brain storm, discussion) using board, data shows and multimedia aids.

3.2. Self learning by preparing essays and presentations (computer researches and faculty

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library)

3.3. Practical session (water samples analysis, efficacy evaluation of disinfectants and uses of nanomaterial).

4-Teaching and learning methods for the students with disabilities

4.1. Office hours- special meeting-practical course revision.

5-Student assessment

5.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
written Exam	a.1.1-a.1.2-a.1.3 a.1.4-a.1.5-a.1.6-a.1.7 -a.1.8-a.1.9-a.1.11	a.2.1.- a.2.2.-a.2.3-a.2.5-a.2.6-a.2.7	a.3.5.- a.3.6-a.3.7- a.3.8-a.3.9.	a.4.1.
Practical Exam	a.1.3.-a.1.6.-a.1.11.	a.2.1.- a.2.2.-a.2.4-a.2.6-a.2.7	a.3.1-a.3.2-a.3.3- a.3.5-a.3.6- a.3.7-a.3.8- a.3.9	a.4.2.-a.4.3-a.4.4.-a.4.5
Oral Exam	a.1.1-a.1.2-a.1.3 a.1.4-a.1.5-a.1.6-a.1.7.- a.1.8-a.1.9-a.1.11	a.2.3-a.2.5-a.2.6-a.2.7	a.3.2.-a.3.3.-a.3.5.- a.3.6-a.3.7- a.3.8-a.3.9	a.4.1.-a.4.3.

5.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	15th
written exams	Managed by administration
Oral Exam	Managed by department
Student activities	-

5.3. Weight of assessments:

Assessment	Weight of assessment
Practical exams	30
written exams	50
Oral exams	20
Student activities	-
Total	100%

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8- List of references

8.1. Notes and books

Departmental notes on:

- Textbook of Animal, Poultry and Environmental Hygiene (part1)
-Textbook of Animal, Poultry and Environmental Hygiene (part II)
-Practical Note of Animal, Poultry and Environmental Hygiene (part I)
-Practical Note of Animal, Poultry and Environmental Hygiene (part II)

8.2. Essential books: in library (Faculty of Veterinary Medicine)

- Environmental epidemiology principles and methods." Ray.M., Merrill".(2008)
- Veterinary Epidemiology: An Introduction [Paperback] Dirk Pfeiffer
- Veterinary Epidemiology, Third Edition By Michael Thru field (1995)
- Water pollution (causes, effects and control) P.K Goel (1997)
- Principles and practice of soil science R.E White, Blackwell Science (1997).
- Farm animal Health and Disease control John K. Philadelphia 1982
- Understanding Epidemiology, Mary E. Trrrence 2002.
- Animal Health and Housing. "David Sainsbury", London, Bailliere, Tindal and Cassel 1997.
- Animal Health and Housing. "David Sainsbury" Blackwell Science 2000.
- Keeping livestock healthy, N Bruce Haynes (2001).
- Disinfection, Sterilization and preservation Seymour S Block, Block Lea Febiger (1991).
- Air pollution. S.K. Agarwal (2009).
- Microbiological examination of water and wastewater. Maria Csuros. (1999).

8.3. Recommended texts

- Veterinary Hygiene by Robert Georg Linton (Paperback - 8 Jan 2010)
- Veterinary Hygiene by R.G Linton (Hardcover - 1940)
- A Manual Of Veterinary Hygiene Sir Frederick Smith (Author) Published By: General Books
- Veterinary Epidemiology: An Introduction [Paperback] Dirk Pfeiffer Dirk Pfeiffer (Author) › Visit Amazon's Dirk Pfeiffer Page
- Veterinary Epidemiology, Third Edition By Michael Thrusfield
- Fundamental pollution: By Krishman Kannan 1997, S. Chard and Company LTD.
- Veterinary Hygiene by Robert Georg Linton (Paperback - 8 Jan 2010)
- Veterinary Hygiene by R.G Linton (Hardcover - 1940)

8.4. Journals, Websites ……..etc

Journals:

- Epidemiology and infection journal
- Veterinary Bulletin
- Veterinary Index

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- Journal of Animal Science
- Journal Toxicology and Environmental Health
- J. Environmental monitoring and assessment
- Environmental pollution
- Journal Veterinary Research
- J. Environ. Quality
- Poultry Science

Websites:

- www.educations.com……
- www.thepigsite.com/
- www.disinfectants1.com
- www.rvc.ac.uk
- www.educations.com
- www.thepigsite.com/
- www.disinfectants1.com
- -www.rvc.ac.uk

Course Coordinators	Head of Department
Dr. Asmaa Nady Mohammed	Prof. Dr. Mohamed Ali Ibrahim

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Topic	Total hours/13 weeks	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
1-Introduction	4	a.1.1.	a.2.1	-	-
2-Air Hygiene	14	a.1.1-a.1.2	a.2.1.	a.3.1	a.4.1
3-Water Hygiene includes using nanotechnology in water purification	14	a.1.1-a.1.2	a.2.2	a.3.2	a.4.2
4-Soil Hygiene	4	a.1.1- a.1.2	a.2.1	a.3.2	a.4.2
5- Disposal of Animal wastes	4	a.1.11	a.2.1-a.2.6.	a.3.4	a.4.3.
6-Stress and animal health	4	a.1.9.	a.2.1.	a.3.7.	a.4.1
7-Housing of animals: (Introduction, Equines , Cattle, sheep,, poultry)	12	a.1.3	a.2.3	a.3.5.	a.4.2-a.4.3-a.4.4.
8- Poultry hygiene	3	a.1.3.	a.2.3.	a.3.5.	a.4.3-a.4.4
9- Case study and farm visit	6	a.1.3	a.2.4.	a.3.4	a.4.2-a.4.3-a.4.4-a.4.5
Total	**65 hr**.				
Second semestre (Preventive Medicine)					
1) Epidemiology (Introduction, Uses, Basic epidemic theory, Epidemic curve, Outbreak investigation, Eradication.	17	a.1.4	a.2.4-a.1.5	a.3.6	a.4.1 a.4.3
2) Control of contagious diseases and quarantine regulation	6	a.1.5	a.2.5	a.3.7	a.4.1
3) Disinfection of livestock farms	11	a.1.8	a.2.6	a.3.5	a.4.1

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4) Biosecurity	6	a.1.7	a.2.5	a.3.5	a.4.1- a.4.3
5) Control of external parasites in livestock farms	9	a.1.6	a.2.6	a.3.8	a.4.1
6) Aquaculture hygiene	6	a.1.7.	a.2.3.	a.3.9.	
7) Hygienic disposal of animal mortalities	4	a.1.11	a.2.6	a.2.4	
8) Case report & Visit	6	a.1.3..-a.1.8.	a.2.1. - a.2.2- a.2.6.-a.2.7.	a.3.2. – a.3.4- a.3.5.- a.3.7.	a.4.3- a.4.4- a.4.5
Total	**65 hr.**				