



Course specification 2018-2019

1-Basic information

Course Code:	AHY:5159
Course title :	Environmental hygiene
Academic year:	5th academic Year
Program title:	B. Sc. Veterinary Medical sciences
Contact hours/ week	4 hours/week, (2 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
- 2- The effect of the environment on animal health, productivity and human health
- 3- The relationship between climatic changes and diseases occurrence and subsequently predicting the effects of climatic changes on animal health and production.

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. Recognize the main components of an animal's environment and its effect on animal health and productivity.
- a. 2. Describe livestock problems relating to their environment (air, water, and soil).
- a. 3. Illustrate the housing requirements for specific categories of livestock animals and birds.
- a 4. Understand the causes, stages of stress and its measurable effect on animal health.
- a.5. Summarize the different methods of hygienic disposal of animal wastes.
- a.6. Illustrate the phenomenon of climate change and its effect on animal health and production.

b. Intellectual skills

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

- b.1. Interpret the measurable effect of environmental climatic changes, soil pollution, animal wastes and environmental stressors on animal health and productivity
- b.2. Correlate the hygienic quality of water intended for animal drinking.
- b.3. Compare between different systems for housing of livestock, birds and aquaculture.
- b.4. Analyze and interpret of field data, diagnostic test results in animal health in relation to water, air and soil samples.
- b.5. Relate the causes of stress in animal farms and finding ways to mitigate its effect on animal health.

C. Professional and practical skills

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



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- c.1. Perform experiments and monitor of some gaseous and biological impurities in stable air.
- c.2. Practice complete examination of water sources, water sample and soil samples with reports.
- c.3. Employ nanotechnology in water purification and removal of bacterial contaminants.
- c.4. Perform new technology for hygienic disposal and treatment of animal wastes.
- c.5. Employ environmental needs and hygienic requirements according to each animal species to design animal housing properly.
- c.6. Perform a plan for mitigation of environmental stressors.
- c.7. Obtain knowledge about soil hygiene and its role in maintaining animal health.
- c.8. Employ the acquired information on climate changes to improve animal health and production.

D. General and transferable skills

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

- d.1 Utilize new technological tools.
- d.2 Work in group.
- d.3 Able to communicate with specialists.
- d.4 Participate in private business.
- d.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

Course	Topic	Total (hr)	Lectures	Practical
5th year- Course Title: Environmental Hygiene (Lec. 2 h./week, Pract. 2h./week)	1-Introduction	4	2	2
	2-Air Hygiene	12	4	8
	3-Water Hygiene includes using nanotechnology in water purification	10	4	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)	6	6	-
	8- Climate changes and animal health	2	2	-



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	9- Case study and farm visit	6	-	6
	Total	52	26	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 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, a.2, a.3, a.4, a.5, a.6	b.1, b.2, b.3, b.5	c.3, c.5, c.6, c.7,c.8	d.1.
Practical Exam		b.1, b.2, b.4	c.1, c.2, c.4	d.2, d.3, d.4, d.5
Oral Exam	a.1, a.2, a.3, a.4, a.5, a.6	b.1, b.2, b.3, b.5	c.3, c.5, c.6, c.7, c.8	d.1, d.3

5.2. Assessment schedules/semester:

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

5.3. Weight of assessments:

Assessment	Weight of assessment
Practical exams	20
written exams	50
Oral exams	20
Student activities	10
Total	100%

8- List of references



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8.1. Notes and books

Departmental notes on:

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

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

- Environmental epidemiology principles and methods." Ray.M., Merrill".(2008)
- 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
- 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).
- 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, Websitesetc

Journals:

- Epidemiology and infection journal
- Veterinary Bulletin
- Veterinary Index
- Journal of Animal Science
- Journal Toxicology and Environmental Health
- J. Environmental monitoring and assessment
- Environmental pollution
- Journal Veterinary Research
- J. Environ. Quality
- Poultry Science



Beni-Suef University
Faculty of Veterinary Medicine



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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

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Head of Department

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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	-	-	-	d3
2-Air Hygiene	12	a1,2	b1,4	c1	d1,2
3-Water Hygiene includes using nanotechnology in water purification	10	a1,2	b1,2,4	c2,3	d1,2
4-Soil Hygiene	4	a1,2	b1,4	c7	d1,2
5- Disposal of Animal wastes	4	a5	b1	c4	d2
6-Stress and animal health	4	a4	b1,5	c6	d5
7-Housing of animals: (Introduction, Equines , Cattle, sheep,, poultry)	6	a3	b3	c5.	d4,5
8- Climate changes and animal health	2	a6	b1	c8	d5
9- Case study and farm visit	6	-	-	-	d2,4,5
Total	52				

