



**Department of Animal Resources**

**College of Agriculture**

**University of Salahhadin**

**Subject: Animal Hygiene (Theory and Practice)**

**Course Book – Year 2**

**Lecturer's name: Nazhad Hussein. Qader., PhD**

**M.Sc. Moufaq Jamal Dawood**

**M.Sc. Jinan Najdat Abdulrahman**

**Academic Year: 2019/2020**

## Course Book

<b>1. Course name</b>	<b>Second semester</b>
<b>2. Lecturer in charge</b>	<b>Dr. Nazhad H. Qader</b>
<b>3. Department/ College</b>	<b>Animal Resources / Agriculture</b>
<b>4. Contact</b>	<b>E-mail: nazhad62@yahoo.com Tel: 07504703832</b>
<b>5. Time (in hours) per week</b>	<b>Theory: 2 hours</b>
<b>6. Office hours</b>	<b>6 hours</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	I'm born in KOYA in 1962, from a middle class family, applied to the primary school in 1968, then the secondary school in 1973, afterwards I joined the high school in 1976, got accepted in Technical Institute-Animal Health Department in 1979, graduated in 1982, got a Technical Diploma. I got accepted as a technician in Technical Institute of NAMRUD at 1983. In 1988 I got accepted in bachelor degree in Veterinary College Science- Mosul and graduated in 1993. I got a master degree in Animal Surgery at 2001 in the same college. In 2005 I got accepted in PhD study (Animal Surgery) and graduated in 2009 (Veterinary College Science- Duhok).
<b>9. Keywords</b>	<b>Animal Hygiene</b>
<b>10. Course overview:</b>	
Animal health care, comprising both non-infectious and infectious diseases, can be focused on prevention and eradication (epidemic diseases), on vaccination strategies, as well as on disease reduction and control of (often endemic) diseases by either a curative approach or a risk identification and risk management approach. Disease risk management strategies, addressing several animal hygiene issues, have not been widely adopted yet. Within the EU, disease risk management becomes however more relevant because the use of antibiotics has been more restricted or better justified while the use of anti-microbial feed additives was banned. Another issue regarding the animal health care concerns the economic issue. It is well-known that curing diseases is costly, the more because the disease losses have already occurred. On the other hand,	

preventive animal health care costs are hardly or not seen as an investment; this represents a knowledge, perception and communication problem.

**11. Course objective:**

Health care or disease combat is characterized by two approaches:

[1] *Eradication and prevention*, [2] *reduction and control*, in both approaches the appropriate diagnostic tools should be available, with known sufficient sensitivity and specificity for the proper application in different disease situations.

Biosecurity Plans are meant to control and avoid the introduction of infectious agents into as well as the spread of such agents on the premises of the farm.

**12. Student's obligation**

Attendance, completion of all tests, exams, assignments, and reports.

**13. Forms of teaching**

Data show, and white board

**14. Assessment scheme**

Monthly exams, quizzes, and reports

**15. Student learning outcome:**

- Discuss the concepts and causes of disease transmission through populations of animals.
- Recognize diseases and how they can occur due to a lack of food hygiene or inadequate handling and storage of food and water.
- Describe the etiologic agents, clinical signs, zoonotic potential, treatment and control measures to prevent dissemination of infectious diseases spreading via the food supply.

**16. Course Reading List and References:**

Farm animals management and poultry production (2 nd) N S R Sastry. C K Thomas R A Singh (1982) A.152.

A manual for the primary animal health care worker Talib M. Ali G. Morosetti (1994).

Poultry health hand book L. Dwight Schartz, D.V.M.) (1994) fourth edition

Principles of poultry science S.P. Rose senior lecturer, new port, Shropshire TF108ND, UK. (1997)

Internet web site: [www.poultry.com](http://www.poultry.com)

Intervet company internet site: [www.schering-plouge](http://www.schering-plouge) animal health

**17. The Topics:**

**Lecturer's name**

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1 <sup>st</sup> -2 <sup>nd</sup> week  Definition of health, the factors that deplete or consume this energy, Intervention of chemicals into the body of the animal from many outlets including, Ventilation	Dr. Nazhad (2 hrs)
3 <sup>rd</sup> &4 <sup>th</sup> week  Sources of infection , Disease Control Strategies, Disposal of carcass	Dr. Nazhad (2 hrs)
5 <sup>th</sup> &6 <sup>th</sup> week Animal Biosecurity 1. Remove the source or potential host for the infectious disease by: 2. Prevent the spread of infectious disease by: Remove the Source of the Infectious Diseases Prevent the Spread of Infectious Disease Autonomic Nervous System	Dr. Nazhad (2 hrs)
7 <sup>th</sup> & 8 <sup>th</sup> week Disinfectants Selection of Disinfectants Disinfectant effectiveness depends on many factors these include Means of Disinfection Disinfectants used in veterinary field	Dr. Nazhad (2 hrs)
9 <sup>th</sup> &10 <sup>th</sup> week Meat Hygiene, Meat hygiene and public health, Handling and Transport of Farm Animal, Types of Animal Transport , Inspection before and during transport, The Damage and Dangers That Arise from the Transfer of Animals, Diseases arise during transfer of animals .Diffusion & Transport of Oxygen, Acidity of Blood Breathing ,Diffusion & Transport of CO <sub>2</sub>	Dr. Nazhad (2 hrs)
11 <sup>th</sup> & 12 <sup>th</sup> week Milk Hygiene, Milk-borne Disease, Characteristic and Flavours of Milk, Hygienic Quality of Milk, The Concept of Clean Milk Production , Mastitis, Antibiotics Residues in Milk	Dr. Nazhad (2 hrs)
13 <sup>th</sup> & 14 <sup>th</sup> week Egg Hygiene, Internal infection/contamination, The external physical barrier of the eggshell protection, Preservation/processing of eggs, Global control measures for Salmonella in eggs.	Dr. Nazhad (2 hrs)
15 <sup>th</sup> & 16 <sup>th</sup> week  Fish Hygiene, Organoleptic assessment of raw fish freshness, Average storage life, Public health hazards associated with fish  Basics of Food Microbiology, Bacterial Growth, Bacterial Death, Factors in	Dr. Nazhad (2 hrs)

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Foods Used to Control Microbial Growth, Water activity.	
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**18. Practical Topics (If there is any)**

<b>18. Practical Topics (If there is any):</b>			
	<b>Weeks(6hrs)</b>	<b>Lecturer's name</b>	<b>Topics</b>
1	<b>1<sup>st</sup> week26/09/2019</b>	<b>Principles of handling &amp; Restraining livestock</b>	<b>Practical controlling, restraining and handling of ruminants.</b>
2	<b>2<sup>nd</sup> week3/10/2019</b>	<b>Food animal slaughter places; slaughter slabs &amp; abattoirs – siting, layout, construction, operations &amp; management</b>	<b>Definition of abattoir, components, function of parts and operation performed on there.</b>
3	<b>3<sup>rd</sup> week10/10/2019</b>	<b>Practically Control and prevention of internal parasitism in Sheep and Goats</b>	<b>Treatment and control of external parasites in farm animals.</b>
4	<b>4<sup>th</sup> week17/10/2019</b>	<b>Practically Control and prevention of external parasites on Sheep and Goats</b>	<b>Treatment and control of internal parasites in farm animals.</b>
5	<b>5<sup>th</sup> week24/10/2019</b>	<b>Types and routes of vaccine administration.</b>	<b>To identify the most important vaccine and routes of administration in animals.</b>
6	<b>6<sup>th</sup> week31/10/2019</b>	<b>Clean milk production at farm level, milk transportation, adulterants and residues of public health importance (drugs, pesticides, mycotoxins)</b>	<b>Process of milk collection, transport and milk adulterant methods.</b>
7	<b>7<sup>th</sup> week7/11/2019</b>	<b>Determining_Age_Animals_</b>	<b>Determining undesirable animals in the field.</b>
8	<b>8<sup>th</sup> week14/11/2019</b>	<b>Mastitis, clinical signs, control and treatment.</b>	<b>To identify the most important cases of mastitis and methods of the treatment and prevention.</b>

9	9 <sup>th</sup> week21/11/2019	Hyeigen of incubation and hatcheries	important needs of eggs to grow in to chick, hatchery sanitizing, eggs storage and pre incubation fumigation
10	10 <sup>th</sup> week28/11/2019	How disinfect hatcheries and fumigate eggs in the hatcheries.	Receiving eggs in a special storage at correct temperature and humidity, how disinfect the hatcheries to prevent hatchery borne diseases.
11	11 <sup>th</sup> week5/12/2019	Hygiene of poultry house.	Importance of cleaning process, , how we disinfect poultry house and Important of bio security.
12	12 <sup>th</sup> week12/12/2019	How begin clean poultry house in the farm	Wearing cloves and overall and plastic shoes, beginning to clean the equipment's and then disinfect them, cleaning the floor , walls, selling , out door and around the house
13	13 <sup>th</sup> week19/12/2019	Vaccine and methods of vaccination	Meaning of vaccination, why all vaccines in poultry against viral diseases, types & methods of vaccines
14	14 <sup>th</sup> week26/12/2019	Handling and inspection of poultry eggs; physical abnormalities and procedures; judgment of quality	Explain how to egg inspection and procedure of judgment of quality
15	15 <sup>th</sup> week2/01/2020	Water quality and sanitizers used in poultry farms	Water quality and its safety, different types of sanitizers can be used safely.



- 1- Dipping is very effective; currently, mobile dipping vats for sheep and goats are available.
- 2- Due to the biological cycle of the ectoparasites, a single treatment may not be efficient.
- 3- All animals introduced to a farm must be treated immediately upon arrival.
- 4- If external parasites are seen on an animal, it should be treated immediately.
- 5- Once the animals are treated the buildings/ paddocks, barns must be thoroughly cleaned.
- 6- External parasites can develop resistance to acaricides and this is encouraged by frequent dipping.
- 7- Regular removal of moist bedding, hay and manure along.

## 20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

## 21. Peer review

### پیداچونہوہی ھاوہل

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

*(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).*

ئەم كۆرسىبووكە دەبىت لەلایەن ھاوھلئىكى ئەكادىمىيە سەپىر بىكرىت و ناوھرۆكى بابەتھانى كۆرسەكە پەسەند بىكات و جەند ووشەيەك بنووسىت لەسەر شىاوى ناوھرۆكى كۆرسەكە و واژووى لەسەر بىكات. ھاوھل ئەو كەسەيە كە زانىارى ھەبىت لەسەر كۆرسەكە و دەبىت پلەي زانستى لە ماموستا كەمتر نەبىت.