



**University of Salahaddin-Erbil**

**College of Agricultural Engineering Sciences**

**Department of Animal Resource**

**Subject: Poultry Product Technology**

**Course Book: 4<sup>th</sup> grade**

**Lecturers' Names: Ms. Gulstan Hamadamin Radha**

**Ms. Lina Salah Mahdi**

**Academic Year: 2023-2024**

# Course Book

1. Course name	Poultry Product Technology
2. Lecturer in charge	Ms.Gulstan Hamadamin Radha Ms. Lina Salah Mahdi
3. Department/ College	Agriculture College/Animal resource
4. Contact	e-mail: <a href="mailto:lina.mahdi@su.edu.krd">lina.mahdi@su.edu.krd</a> Tel: 07504788429 <a href="mailto:gulstanradha@gmail.com">gulstanradha@gmail.com</a> Tel: 07715322854
5. Time (in hours) per week	Practical: 2
6. Office hours	Available all days during the week
7. Course code	
8. Teacher's academic profile	Gulstan Hamadamin Bsc. in Animal Resource Dept. (2009) Msc. in Poultry Production (2017) Lina Salah { Bsc. in Animal Resource Dept. (2008) Msc. in Poultry Nutrition (2015)
9. Keywords	
<p><b>10. Course overview:</b></p> <p>Many changes have happened in poultry housing in recent years, such as the introduction of computer monitoring and control of the machines, and many automation from day-to-day in poultry production operations. Additionally, there is increasing awareness of the role of Brooding and growing management skills of different poultry categories.</p> <p>In this course the <b>Intended Learning Outcomes (ILOs) are knowledge and understanding the Principles and practices of commercial poultry production. Principles and practices of environmental management, marketing and record keeping ensuring scientifically-based management decisions and consumer product acceptance. Beside the Intellectual Skills that include</b> raising thinking for how to deal with field problems. Solving unexpected problems in poultry houses. Practice and applications of modern techniques in poultry industry. Train students to poultry performing survey observations, analyzing results and poultry production quality assessment. Ability to diagnose environmental problems and reasons of lower hatchability and productivity.</p> <p>One hour lecture, two hours lab per week deals with many studies, in laboratory practically displaying and/or through images and videos meat type birds; housing, brooding and raising requirements; poultry performance evaluating methods; slaughtering and slaughter house operations; carcass and poultry meat quality assessment. As well as, showing types of eggs, all shapes and sizes of table eggs that exist in markets and produced by local breeder flocks and hybrids. Egg quality assessing methods for differentiating good and non good commercial eggs. Furthermore going to some commercial poultry houses that present in Erbil Governorate to get more notes and information that explained by the experts.</p>	
<p><b>11. Course objective:</b></p> <p>The aim of the course is to provide the understanding poultry industry, past and present, basic concepts of poultry requirements in housing, brooding and rearing managements. As well as, the technologies of producing high quality table eggs and poultry meat, Marketing principles of poultry product and by-products, Poultry house records and record analysis.</p>	

## 12. Student's obligation

- Students are encouraged to take notes during lecture to use as study material for the quiz. It is important to listen to everything the leacturers says, do not rely only on the PowerPoint. Students are required to attend each class session and participate in all activities occurring during the class.
- Quizzes will occur each week and will cover the material presented during the previous week lecture. Students will have 10 minutes at the beginning of the class period to take the quiz. Students who arrive late will not be given extra time.
- Students are also required to wear lab-coat to each class.
- They must be respectful and attentive during lectures; this means no using cell phones and other electronic devices during this time.
- Students that disrupt the class by talking during lecture will be removed from the classroom.

## 13. Teaching and Learning Methods:

Lectures with the help of data show and power point slide show, images, videos and white board  
 Discussions and Class activities  
 Poultry farm project models training  
 Seminars by student groups and within class discussions

### Facilities Required for Teaching and Learning

- Small group of students.
- Up- to- date references in library.
- Well equipped poultry houses and rearing pens
- Medium size flocks of chicken, quail...etc

## 14. Assessment scheme

- 1- **Assessment 1:** Class tests weekly (activities and written quiz) T o assess understanding of previous lecture.
- 2- **Assessment 2:** Written Mid-term exam To assess student understanding of the taught topics and practical application in solving problems. Tow monthly exams will be done (10 marks/exam); the exams will be done after every 4 lectures ( 5<sup>th</sup> lecture is exam).
- 3- **Assessment 3:** Written Final-term To assess student understanding of the taught topics and assess student skills in practical applications in solving problems and how to deal with the owners concerning the whole term studied materials.

### Weighing of assessments (in each semester):

	Exam	Marks/Exam/Semester
Assessment 1	Class tests	5
Assessment 2	Written Mid-term	10
Assessment 3	Written Final-term	20
<b>Total marks/ semester</b>		<b>35</b>

### **15. Examination**

Q1/ A hall with dimensions (3\*3\*10) m calculate the following:

- 1) Total numbers of birds can be reared till 42 days.
- 2) Feeders determining the type of the feeder
- 3) Waterers

Q2/ A/Enumerate 1) slaughtering operations. 2) main and secondary cuts of the carcass.

Q2/ B/ Calculate dressing percentage for a chicken that has

- 1- Live body weight (2.5 Kg);
- 2- Weight of carcass with giblets (1850 gm)
- 3- Weight of carcass without edible parts (1625 gm).

### **16. General student learning outcome:**

- a) Experience in team work and critical analyses in relation to poultry production.
- b) Handling and management of large number of chickens, turkey, water fowls; quails,..... etc .
- c) Internet Searching
- d) Brooding and growing management skills of different poultry categories.
- e) Solving problems skills: the student will demonstrate knowledge of poultry production facilities and solving the practical problems that interface owners who raise poultry.

### **17. List of References:**

#### **1. Course Notes:**

- Poultry Production and technology (lectures and practice)
- Poultry products processing (lectures & practice)

#### **2. Essential Books:**

. **Alternative Systems for Poultry Health, Welfare and Productivity. 2012.** Victoria Sandi lands and Paul M. Hocking. CAB International publication. ISBN 978-1-84593-824-6 (alk. paper).

. **Improving the safety and quality of eggs and egg products. 2011. Volume 1: Egg chemistry, production and consumption.** Yves Nys, Maureen Bain and Filip Van Immerseel. Woodhead Publishing Series in Food Science, Technology and Nutrition: Number 213.

**Handbook of Poultry Science and Technology. 2010.** Volume 1. Isabel Guerrero-Legarreta. A John Wiley & Sons, Inc., Publication.

**Handbook of Poultry Science and Technology. 2010.** Volume 2. Isabel Guerrero-Legarreta. A John Wiley & Sons, Inc., Publication.

**The basics of chicken farming (in the tropics). 2005.** Bart Gietema Agromisa. Foundation, Wageningen . ISBN: 90 5285 006 2. NUGI: 835.

#### **2. Recommended Books:**

**Commercial Chicken Production Manual.** North, M.O. 1978. Second Edition. AVI Publishing Company, West Port. Connecticut

. **Poultry Farm Manual A Reference Guide For Central & State Poultry Farms. 2015.**

**3. Periodicals, websites, ..... etc**

- Egyptian poultry science
- Poultry science (national)
- British poultry science
- World poultry science
- Web sites related to the program contents and new researches until 2018.

18. The Topics:	Lecturer's name
<p><b>1<sup>st</sup> Lecture:</b> Course book introduce the lessons and it's important to studying with some examples for explaining more.</p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b>2<sup>nd</sup> Lecture:</b> The purpose of this lecture is explaining <b>Formation of the egg</b> The nutritive value of the egg, Chemical composition of egg. Factors affecting quality during production Eggs.</p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b>3<sup>rd</sup> Lecture: The objective of the article: to address What is the egg production process includes?</b> <b>Industrial Uses of Egg :-1- Foodstuff Industries.2- Medicine and Medical Research.3- Manufacturing.4- Traditional Uses.</b></p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b>4<sup>th</sup> Lecture:</b> The aim of this article is to illustrate the measurements <b>Quality of Table Egg that</b> Measures of egg quality with reference to market desirability, External appearance, Candling, Quality of opened eggs, Deterioration of Egg quality, Keeping Quality of Table egg.</p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b>5<sup>th</sup> Lecture:</b> The aims of this lecture is to shows to the students different instruments which is used to measurements of Internal and external egg quality.(practical lecture) and learn the students how each parts of egg is measured.</p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b>6<sup>th</sup> Lecture: The objective of the article: to address Table Egg Quality include Maintaining egg quality in the poultry house, Egg collection and handling prior of Transporting eggs the markets, Reducing bacterial contamination of eggs.</b></p>	<p>Gulstan Hamadamin (2 hrs)</p>

<p><b><u>7<sup>th</sup> Lecture:</u></b> The purpose of this lecture is explaining Poultry House Environments, The Environmental Problems. Poultry Houses and Poultry House Design.</p>	<p>Gulstan Hamadamin (2 hrs)</p>
<p><b><u>8<sup>th</sup> Lecture:</u></b> Aim of the article: to provide complete information about poultry processing. Information which get from this lecture: Introduction about poultry processing and all processing steps.</p>	<p>Lina Salah Mahdi (2 hrs)</p>
<p><b><u>9<sup>th</sup> Lecture</u></b> The objective of the article: to provide complete information about the all parts of carcass percentages and Evisceration from to carcass weight and live weight in male and female,</p>	<p>Lina Salah Mahdi (2 hrs)</p>
<p><b><u>10<sup>th</sup> Lect.:</u></b> Visiting an integrated poultry project in Erbil governorate to apply the lessons in the form of scientific theory and to see parts of the project, and how to manage it.</p>	<p>Lina Salah Mahdi (2 hrs)</p>
<p><b><u>11<sup>th</sup> Lect</u></b> : The objective of the article: to provide complete information about the Measurements of Meat Quality. Information which get from this lecture: Water Holding Capacity (WHC), Meat tenderness measurement, Factors that Affect Poultry Tenderness, Muscle pH measurement.</p>	<p>Lina Salah Mahdi (2 hrs)</p>
<p></p>	<p>Lina Salah Mahdi (2 hrs)</p>

<p><b>12<sup>th</sup> Lect.:</b> The objective of the article: to provide complete information about the Cooking and Barbecuing Poultry.</p> <p>Information which get from this lecture: Physical and Chemical Changes Caused by Cooking, Preparation of Carcasses for Cooking, Poultry Cooking and Barbecuing.</p> <p><b>13<sup>th</sup> Lect.</b> Doing some reports about all lecture.</p>	<p>Lina Salah Mahdi (2 hrs)</p> <p>Lina Salah + Gulstan Hamadamin (2 hrs)</p>
<p><b>19. Extra notes:</b> 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.</p>	
<p><b>20. Peer review</b> <span style="float: right;">پیداچوونہوہی ھاوہل</span> 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).</p>	