

Ministry of Higher Education and Scientific research



**Department of Animal Resources.**

**College of Agriculture**

**University of Salahaddin- Erbil**

**Subject: PRACTICAL POULTRY NUTRITION**

**Course Book – (Year 4)**

**Lecturer's name, MSc. Sami Mahdi**

**Dr. Payam Sadik**

**Academic Year: 2023/2024**

## Course Book

<b>1. Course name</b>	<b>POULTRY NUTRITION</b>
<b>2. Lecturer in charge</b>	
<b>3. Department/ College</b>	<b>Animal Resources Department / Agriculture College</b>
<b>4. Contact</b>	e-mail: <a href="mailto:payam.sabir@su.edu.krd">payam.sabir@su.edu.krd</a>  <a href="mailto:sami.ahmed@su.edu.krd">sami.ahmed@su.edu.krd</a> Tel: (07504489081)
<b>5. Time (in hours) per week</b>	<b>Practical: 3</b>
<b>6. Office hours</b>	<b>5 days a week</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	
<b>9. Keywords</b>	
<b>10. Course overview:</b>	<p>The poultry industry has a very important place in the food industry, because it has provided a rich source of protein like egg and white meat as a staple food and cheap to humans. The basis of the production process in the production of poultry is nutrition, because more than 60% of the expenses of the production process go to provide feeds for poultry flocks therefore reduce this expense by using the modern scientific preparation methods of these diets lead to reduced expenses nutrition events without any nutritional problems</p>
<b>11. Course objective:</b>	<p>The goals of the practical Section of Poultry Nutrition are to give students accurate information about ingredients or raw materials used in the composition of poultry diets and their content of nutrients, as well as harmful contents in these raw materials and the acceptable ratios in the feed.</p> <p>As well as providing the student information to make it able to calculate the needs of the birds (broiler chickens and laying hens) from energy, protein and other important nutrients</p> <p>Provide students the skills for using the computer to prepare balanced diets with optimum prices</p>
<b>12. Student's obligation</b>	

The role of students in the class should attend to the class weekly and I will put some points on it, every week I will do quiz for them and students participate in the class is very important.

### 13. Forms of teaching

I use the projector to display my objectives by power point, sometimes we need to write some information on the white board to clarify it. I will give all my objectives on the word paper to my students.

### 14. Assessment scheme

First Exam after six lectures

Mark Distribution:

Monthly Exam, 12%

Quiz and report, 3%

Final Exam, 20%

Final Mark, 35%

### 15. Student learning outcome:

After finishing these courses the students will be described types of poultry feed, and preparing feed for the poultry with the birds requirements and the type of ingredients that use for preparing the feed with different characteristics, which make them suitable for different purposes. The students will be introduced to the basic principles of poultry feed that required for the production and be able to identify problems in livestock production. Give a basic outline of principles of feeding, and the price of it.

### 16. Course Reading List and References:

- Rose. S.P. 1997. Principles of Poultry Science. CAP international/ Wallingford /Oxon OX10 8DE/ UK. 135p
- OZKAN. Kahraman, Sukru BULGURLU.1995.Kumes Hayvanlarin Beslenmesi. Ege universitesi Ziraat Fakultesi Yayinlari no.264.Izmir-Turkey.174p
- الياسين . علي عبدالخالق . 0991 . الدواجن غذاء وتغذية . مطابع التعليم العالي . العراق ورقة . 468
- الانتاج الحيواني .انتاج الدجاج البياض . المؤسسة العامة للتعليم الفني والتدريب المهني . المملكة العربية السعودية ورقة.262 .
- الانتاج الحيواني .انتاج الدجاج الاحم . المؤسسة العامة للتعليم الفني والتدريب المهني . المملكة العربية السعودية ورقة.261 .

<b>17. The Topics:</b>	<b>Lecturer's name</b>
	Lecturer's name
<b>18. Practical Topics (If there is any)</b>	
<p><b><u>First week</u></b></p> <p><b>Birds Digestive System</b></p>	Lecturer's name ex: (3 hrs)
<p><b><u>Second week</u></b></p> <p><b>The most important feed materials commonly used in poultry feed</b></p> <p>(1) Cereals and its products: corn, barley, wheat, wheat bran</p> <p>(2) Sources of vegetable protein: soybean meal, cottonseed meal, sunflower seed meal, flaxseed meal.</p> <p>(3) Sources of animal protein: fish meal, meat meal, blood meal</p> <p>(4) Secondary products: The residues of Poultry Slaughterhouses - powder of feathers - dairy products</p>	ex: (3 hrs)
<p><b><u>Third week</u></b></p> <p><b>Calculate the daily requirement of protein for chicken</b></p> <p>A - Calculate the daily requirement of protein for Broiler</p> <p>B - Calculate the daily requirement of protein for laying hens</p>	ex: (3 hrs)
<p><b><u>Fourth week</u></b></p> <p><b>Calculate the daily requirement of Amino acids for chickens</b></p>	ex: (3 hrs)
<p><b><u>Fifth week</u></b></p> <p><b>Training on the Calculating of the daily requirement of protein and amino acids</b></p>	ex: (3 hrs)

<p><b><u>Sixth week</u></b></p>	
<p><b>How to calculate the energy needs of the bird</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Seventh week</u></b></p>	
<p><b>Training on the Calculating of the daily needs of energy</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Eighth week</u></b></p>	
<p><b>Calculation of economic value of ingredients</b></p> <p>Calculate the economic feasibility of feed materials used in the composition of the diet according to their content of protein and energy.</p>	<p>ex: (3 hrs)</p>
<p><b><u>Ninth Week</u></b></p>	
<p><b>Mangers and types of Water cups used in the poultry house. The method of calculating the needs of the flock from Mangers and types of Water cups.</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Tenth week</u></b></p>	
<p><b>Feed formulations and the properties of diets</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Eleventh Week</u></b></p>	
<p><b>Using the Substitution and Replacement Method to prepare feed formulations</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Twelfth Week</u></b></p>	
<p><b>Training on the Substitution and Replacement Method to prepare feed formulations</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Thirteenth week</u></b></p>	
<p><b>Using MICROSOFT EXCEL program for prepares poultry diets</b></p>	<p>ex: (3 hrs)</p>
<p><b><u>Fourteenth week</u></b></p>	
<p><b>Training on the MICROSOFT EXCEL program for preparing poultry diets</b></p>	<p>ex: (3 hrs)</p>

<p><b><u>Fifteenth week</u></b></p> <p><b>Scientific trip to one of the commercial poultry feed mills</b></p>	<p>ex: (3 hrs)</p>
<p><b>19. Examinations:</b></p> <p>The first exam for student at the end of the seventh week and the second exam at the end of the fifteenth week are to use a computer in the exams or the answer on the paper.</p> <p>Example:</p> <p>Q1 / The weight of 43 week-old chicken was 1640 g, the rate of egg weight was 60 g, the daily weight increases 3 g, egg production rate 80% and the daily temperatures 27 Co. How much is the energy required to bird per day</p> <p>A1/ Total k.cal /g/day = W (170-2.2T) + 2E+5ΔW</p> <p>= 1.640(170-2.2X27) + 2X (80X60/100) + 5X3</p> <p>= 292.384 k.cal</p> <p>Q2/ Explain briefly types of changes that occur to the material during the process of food digestion in the gut of poultry</p> <p>A2/physical changes of feed, such as swallowing and swallowing crushing, grinding, which is in the gizzard</p> <p>chemical changes, which include the enzyme excretion along to the gastrointestinal tract, pancreas and liver, as well as hydrochloric acid HCl with the activity of the bacteria and so with the conversion of dietary compounds complex installation to simple materials easy absorption, turning carbohydrates into mono sugars such as glucose and decompose fat into fatty acids and turn proteins to amino acids</p> <p>Q3/ Prepare the starter feed formulation for broiler chickens using the Microsoft Excel program, according to the following properties: 22% protein, energy 3100 kcal/kg. 0.59% methionine, Lysine 1.42%, Calcium 1.2%, Phosphorus 0.6% and Fiber 4% .</p> <p>A3/ Prepared on the computer</p>	
<p><b>20. Extra notes:</b></p> <p>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>	

## 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 دەبىتت لەلايەن ھاوئەلىكى ئەكادىمىيەو سەير بىكرىت و ناوەرۆكى بابەتەكانى كۆرسەكە پەسەند بىكات و جەند ووشەيەك بنووسىت لەسەر شىاوى ناوەرۆكى كۆرسەكە و واژووى لەسەر بىكات. ھاوئەل ئەو كەسەيە كە زانىارى ھەبىت لەسەر كۆرسەكە و دەبىتت پلەي زانستى لە مامۇستا كەمتر نەبىت.