

1.Course Name: Principle of Animal Production	
2.Course Code: PRAP114	
3.Semester / Year: first season,2023-2024.	
4.Description Preparation Date: 01/ 02/2024	
5.Available Attendance Forms: learning in presence (theoretical and practical)	
6.Number of Credit Hours (Total of Units : 75 hours (2 hours theoretical and 3 hours practical).	
7.Course administrator's name (mention all, if more than one name)	
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8.Course Objectives	
<p>Course Objectives</p> <ol style="list-style-type: none"> 1.Introducing the student to the classification of animals in the animal kingdom. 2.Introducing the student for phenotypic specifications and productive performance of international and local livestock breeds. 3.Introducing the student to productive performance, breeding and fattening sheep, and genetic improvement of local sheep. 4.Introducing the student to nutrition and preparing fattening diets for sheep. 5.Introducing the student to the field operations that take place daily and weekly for cattle and sheep in the animal field. 6. Introducing the student to the nature and types of animal breeding housing. 7.Introducing the student to the most important common diseases that affect livestock and sheep, their pathogens and methods of prevention. 8. Involving students in practical application of laboratory experiments in groups. 	
9.Teaching and Learning Strategies	
<p>Strategy</p>	<p>theoretical: Interactive lecture strategy Discussion strategy Problem solving strategy by commissioning reports Brainstorming strategy.</p> <p>Practical: Assignment to team work Assigning tasks and reports for each experiment</p>

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 st	Theoretical 2 Practical 3	<p>Theoretical: a1 The student learns about the economic importance of livestock and its relationship to economic integration.</p> <p>The economic importance of livestock and its relationship to economic integration.</p> <p>Practical: b5 Acquires practical and scientific skills in conducting field operations on farm animals.</p>	<p>Theoretical: The economic importance of livestock and its relationship to economic integration. Factors that led to a decline in level of animal production in developing countries and Iraq.</p> <p>Practical: Field operations that take place on a daily basis, some of which are monthly seasonal in animals farm. Neutering, numbering, spraying and dipping, shearing wool, amputating the tail, clipping the beak. Layering.</p>	<p>Theoretical: Using of whiteboard, audio-visual means, Discussions.</p> <p>Practical: audio aids visual, powerpoint, Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams.</p>
2 nd	Theoretical 2 Practical 3	<p>Theoretical: a2 The student acquires the skill in classifying the animal kingdom.</p> <p>Practical: b6 The student prepares cows for milking operations, practices daily milking operations, and manual and mechanical milking methods.</p>	<p>Theoretical: Animal kingdom, classification: Bovine family: cattle genus, Genus Bos, sheep genus, Genus Ovis. Goat genus, Genus Capra. General formal specifications for beef cattle, specifications of carcasses for beef cattle.</p> <p>Practical: Milking, milking methods, and preparing cows for the milking process..</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions..</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>
3 rd	Theoretical 2 Practical 3	<p>Theoretical: a3 The student can learn about the productive and phenotypic characteristics of internationally known livestock.</p> <p>Practical: a10 The student acquires the skill and management experience in practicing the suckling process</p>	<p>Theoretical: Cattle breeds in the world: beef cattle, milk cattle, dual-purpose cattle</p> <p>Practical: The suckling, its definition, methods of suckling, small calves suckling, methods of suckling artificial suckling.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>

		using both natural and artificial methods.			
4 th	Theoretical 2 Practical 3	Theoretical: a4 The student learns about the phenotypic characteristics and productive performance of Iraqi cows. Practical: a11 The student gains scientific experience in designing and constructing livestock housing and providing them with administrative services and artistic.	Theoretical: Iraqi cows: their appearance and production specifications and their breeding areas in Iraq. Breeding of calves, milk fever causes and treatment. Practical: Animal housing, its types, specifications, and technical and engineering conditions in constructing animal housing..	Theoretical: use whiteboard, Audio aids and visual, discussions. Practical: audio aids visual, powerpo Bulletins discussions	Theoretical: Quizzes, Reports, discussions Exams. Practical: Quizzes, reports, posters, discussions, Exams.
5 th	Theoretical 2 Practical 3	Theoretical: b1 The student learns about the phenotypic and genetic characteristics and productive performance of buffalo animals and their daily milk production? Practical: a12 The student learns about farm records, their importance and types in the animal field .	Theoretical: Buffalo, a historical overview the origin and origin of the buffalo and the general and physiological characteristics of the buffalo. Reproduction i buffalo. Breeds of buffalo in the world. Production of milk and meat in buffalo. Practical: Definition of farm records their types, importance, and benefits.	Theoretical: use whiteboard, Audio aids and visual, discussions. Practical: audio aids visual, powerpo Bulletins discussions.	Theoretical: Quizzes, Reports, discussions Exams. Practical: Quizzes, reports, posters, discussions, Exams..
6 th	Theoretical 2 Practical 3	Theoretical: b2 The student learns about the classification and location of sheep in the animal kingdom, methods of classifying sheep, sheep breeds, meat sheep, milk sheep, and wool sheep. Practical: a13 The student classifies the quality of feed according to its raw fiber content. Introducing students to coarse and concentrated feed materials and the differences between them.	Theoretical: Classification of the location of sheep in the animal kingdom, methods of classifying sheep, breeds of sheep, meat sheep, sheep milk, sheep wool. Practical: Coarse and concentrated feed materials and the differences between them.	Theoretical: use whiteboard, Audio aids and visual, discussions. Practical: audio aids visual, powerpo Bulletins discussions	Theoretical: Quizzes, Reports, discussions Exams. Practical: Quizzes, reports, posters, discussions, Exams.

7 th	Theoretical 2 Practical 3	<p>theoretical a5 The student learns about the types of Iraqi sheep and their appearance and production characteristics, and clarification . Advantages of raising sheep.</p> <p>Practical: a14 The student monitors and determines the quality of pastures and grazing systems..</p>	<p>Theoretical: Iraqi sheep: Awassi sheep, Kurdish sheep, Arab sheep, Hamdaniya sheep. Naemi sheep, Najdi sheep. Appearance and production specifications.</p> <p>Practical: Pastoralism, definition of pasture, pasture and grazing systems, Types of pastures: natural pastures, artificial pastures.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>
8 th	Theoretical 2 Practical 3	<p>Theoretical: a6 The student can gain knowledge about the characteristics and advantages of goat breeding and the geographical distribution of goats in the world.</p> <p>Practical: b7 The breeder can prepare the necessary diets for the animals to meet their needs for nutrient compounds.</p>	<p>Theoretical: Goats, goat breeds in hot and semi-hot areas, European goat breeds, Iraqi goat breeds, Local goats, maraz, mountain goats</p> <p>Practical: Preparing and preparing rations according to nutritional decisions: the maintenance ration and production ration.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams.</p>
9 th	Theoretical 2 Practical 3	<p>Theoretical: a6 The student can gain knowledge about the characteristics and advantages of goat breeding and the geographical distribution of goats in the world.</p> <p>Practical: a15 The breeder can prepare necessary diets for animals to meet their needs for nutritional compounds</p>	<p>Theoretical: Goats, goat breeds in hot and semi-hot areas, European goat breeds, Iraqi goat breeds, Local goats, maraz, mountain goats</p> <p>Practical: Preparing and preparing rations according to nutritional decisions: the maintenance ration and the production ration..</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>
10 th	Theoretical 2 Practical 3	<p>Theoretical: b3 The student can learn about the productive, phenotypic, and genetic characteristics of horses and camels and determine the location of horses and camels in the animal kingdom.</p>	<p>Theoretical: Horses and camels, introduction, location of horses and camels in the animal kingdom, breeds of horses and camels, types of camels, structure of the digestive system, reproduction in camels</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions,</p>

		<p>Practical: b8 The student can gain experience in knowing the parts function of the male female reproductive system and method of reproduction and reproduction in livestock and poultry.</p>	<p>and horses.</p> <p>Practical: Male reproductive system, female reproductive system in livestock and poultry. A scientific visit to the Artificial Insemination Center/Ministry of Agriculture.</p>	<p>Bulletins discussions</p>	<p>Exams.</p>
11 th	Theoretical 2 Practical 3	<p>Theoretical: b4 The student gains scientific experience in preparing and balancing diets in terms of nutritional components for farm animals.</p> <p>Practical: c3 The student gains theoretical and practical scientific experience about artificial insemination, importance, advantages and disadvantages.</p>	<p>Theoretical: Nutrition and feed: concentrated feed and coarse feed. Preparing, preparing and balancing diets for animals, the basic rules in formulating the diet.</p> <p>Practical: Artificial insemination: its definition, semen collection, types of semen diluents, semen preservation.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>
12 th	Theoretical 2 Practical 3	<p>Theoretical: c1 The student gains experience in determining the needs of animals for nutritional compounds, qualifying him in management Raising a productive herd on the farm.</p> <p>Practical: b9 The student gains scientific experience in classifying poultry determining its location in the animal kingdom and its economic importance.</p>	<p>Theoretical: Food compounds, their definition, their most important importance, needs for growth, fattening, and production of food compounds.</p> <p>Practical: Poultry: Definition of poultry, determining location of poultry in the animal kingdom, classification of poultry (biological classification, classification by origin, economic classification).</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpoint Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams.</p>
13 th	Theoretical 2 Practical 3	<p>Theoretical: a8 Introducing the student to the internal components of the egg and the factors that help in the occurrence of</p>	<p>Theoretical: Poultry, the origin of poultry, a historical overview of human domestication of</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical:</p>

		<p>diastasis in laying hens.</p> <p>Practical: a16 The student can identify internal components of the egg and select suitable eggs for hatching.</p>	<p>domestic birds, the advantages of raising poultry over other farm animals., the location of poultry in the animal kingdom.</p> <p>Practical: Eggs and their components, definition of the egg and identification of its components, factors that help in the appearance of laying in laying hens. Classification of poultry (biological classification, classification according to origin, economic classification).</p>	<p>Practical: audio aids visual, powerpo Bulletins discussions</p>	<p>Quizzes, reports, posters, discussions, Exams..</p>
14 th	Theoretical 2 Practical 3	<p>Theoretical: a9 The student learns about the classification of poultry according to geographical location. Classification of poultry according to production performance.</p> <p>Practical: c4 The student gains practical experience in conducting egg hatching operations. Using the hatching Machine.Cleaning, sterilization and health conditions in preparing and equipping the hatching machines.</p>	<p>Theoretical: Poultry breeds, classification of poultry according to geographic location, classification of poultry according to production performance.</p> <p>Practical: Hatching, hatching methods, types and sizes of hatching machines, design and classification of hatching places. Suitable environmental conditions for hatching.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpo Bulletins discussions.</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams.</p>
15 th	Theoretical 2 Practical 3	<p>Theoretical: c2 The student gains experience and power of observation in detecting infestations with external and internal parasites. Cleaning and disinfecting animal housing periodically</p>	<p>Theoretical: Parasites and diseases: external and internal parasites, bacterial and viral diseases. Organizing a scientific visit for students to the veterinary hospital to examine the students for medical cases.</p>	<p>Theoretical: use whiteboard, Audio aids and visual, discussions.</p> <p>Practical: audio aids visual, powerpo</p>	<p>Theoretical: Quizzes, Reports, discussions Exams.</p> <p>Practical: Quizzes, reports, posters, discussions, Exams..</p>

		during the breeding and production period. Practical: c5 The student can identify and diagnose pathological infections, whether their causes are bacterial or viral for infected animals Providing treatment for infected animals.	Practical: Bacterial diseases: symptoms, causes, treatment. Viral diseases:symptoms, causes, treatment..	Bulletins discussions.		
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11.Course Evaluation:


No.	Evaluation methods	Evaluation date (week)	marks	Relative weight (%)	
1	The first short test Quiz (1). Theoretical: Practical	Week 4: Theoretical: Short test Quiz (1). Week 4: Practical: Short test Quiz (1).	Theoretical: 2.5 Practical: 2.5	5%	
2	Monthly exam (1).	Week 9: Theoretical test (1). Week 9: Practical test (1).	Theoretical: 10 Practical : 5	15%	
3	Second short test Quiz.(2).	Week 11: Theoretical:Short test Quiz (2). Week 11: Practical:Short test Quiz (2)	Theoretical: 2.5 Practical: 2.5	5%	
4	Monthly exam (2).	Week 13: Theoretical test (2). Week 13: Practical test (2).	Theoretical: 10 Practical : 5	15%	
5	Quest rate.	Seasonal rates are announced at the end of the semester.	Theoretical: 25 Practical : 15	40%	
6	Final practical test.	Practical exams week.	20	20%	
7	Final theoretical test.	The week of theoretical exams.	40	40%	
8	Total	The final score of the theoretical and practical of final exam at the end of academic year.	100	100%	

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc .

12.Learning and Teaching Resources .

Required textbooks (curricular books, if any)	Principles of Animal Production (Authors by Prof.Dr.Najib Tawfiq Ghazal, Prof.Dr.Nahil Mohammad Ali Suleiman and Prof.Dr.Radi Khattab Abdullah,2000. Dar Al-Kutub for Printing and Publishing, University of Mosul/Iraq.
Main references (sources)	1.Animal Nutrition translated into Arabic Language by (Dr. Ahmed Al Haj Taha and Dr. Mohamed Ramzi Taqa)

	<p>for the year 1985. Dar Al-Kutub for Printing and Publishing, University Mosul/Iraq.</p> <p>2.Principles of Animal Production (Auhor by Prof. Dr. Mohammad Ali Makki Al-Rubaie), for the year 2020. Al Noor Library.</p> <p>3 Dairy cattle .(Prof. Dr. Ahmed Al-Haj Taha, Dr. Akram Thanoun Younis, and Dr. Mahmoud Rashid Al-Rashed) for the year 1989. Dar Al-Kutub for Printing and Publishing, University of Mosul/Iraq.</p>
<p>Recommended books and references (scientific journals, reports...)</p>	<p>1.Egyptian Journal of Animal Production:ISSN=0302-4520, and the impact factor of the journal is (1.84)/,Association of Arab Universities Cairo-Egypt. https://www.arabimpactfactor.com/pages/tafaseljournal.php?id=8466&date=2022</p> <p>4.Journal of Animal Sciences and Livestock Production. ISSN:2577-0594,CiteScore:0.79. https://www.primescholars.com/animal-sciences-and-livestock-production.html</p> <p>3.Journal of Animal,Poultry & Fish Production (JAPFP),Publisher: Scientific Society of Agricultural Sciences,Ismaila,Egypt https://japfp.journals.ekb.eg/</p>
<p>Electronic References, Websites</p>	<p>1.Animal production in hot regions (a series of lectures on animal production materials). https://lejan6olabia.site123.me/</p> <p>2.Animal and poultry production/Faculty of Agriculture and Natural Resources/Aswan University/Egypt. https://agr.aswu.edu.eg/sections/animal-and-poultry-production/</p> <p>3. Department of Animal Production/College of Agricultural Engineering Sciences/University of Baghdad. Teaching lectures https://coagri.uobaghdad.edu.iq/?page_id=15013</p>



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