Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: University of Anbar

Faculty/Institute: College of Agriculture

Scientific Department: Department of Animal production

Academic or Professional Program Name: Animal Production

Final Certificate Name: BSc of Agriculture \ Animal Production

Academic System: Semester

Description Preparation Date: 25/1/2024

File Completion Date: 15/4/2024

Signature:

Head of Department Name:

Prof.Dr.Thair Rasheed Mohammed

Date:15/4/2024

Signature:

Scientific Associate Name

Assist.Prof. Dr Osama Hussein Mhaidi

Date: 15 /4/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Assist.Prof. Dr. Waleed lsmail kurdi

Date: 15 /4/2024

Signature:

Approval of the Dean

Prof.Dr.Idham Ali Abed

15 /4/2024

1. Program Vision

The management of the Animal Production Department aspires for the department to have a leadership role in promoting education, scientific research and community service in the field of animal production and for the department to play a major role in being a model of excellence in providing high-quality education supported locally and globally and keeping pace with development by providing an academic environment in which students and faculty members interact. Teaching to create high-quality learning environments and promote food security and environmental sustainability.

2. Program Mission

Our mission in the Department of Animal Production is to prepare professional graduates who are able to identify and evaluate various problems and find solutions to them in the field of animal production, by providing high-quality education and supporting scientific research to meet global challenges in food security and sustainability. We seek to develop sustainable agricultural practices that respect the environment and ensure the sustainability of natural resources, with a focus on fruitful cooperation with agricultural sectors and community service. We are committed to providing consultation and technical support to improve agricultural productivity, which strengthens our position as a leading center in the field of animal production

3. Program Objectives

1. Enhancing scientific and practical knowledge: Providing high-quality education covering all aspects of animal production in all its specializations, including nutrition, physiology, behavior, breeding, genetic improvement, and reproductive

physiology, in addition to fish farming and its physiology.

2. Scientific research and innovation: Encouraging and supporting innovative scientific research that contributes to developing the field of animal and poultry production, and addresses current challenges in food security and sustainability.

3. Cooperation with industry: Building strategic partnerships with agricultural sectors and research institutions to enhance the application of scientific research and exchange of knowledge.

4. Sustainable development: Working to develop animal production practices that respect the environment and contribute to preserving natural resources for future generations.

5. Community service: Providing consultation and technical support to farmers and agricultural institutions to improve

Productivity and sustainability in the agricultural sector.

6. Developing students' personal and professional skills: Qualifying students to be leaders in the field of animal production, equipped with the necessary skills to face future challenges and contribute effectively to society.

7. Promoting integration between disciplines: Encouraging cooperation between different disciplines within the department and with other relevant departments to develop innovative solutions to challenges in the field of animal production.

8. Expansion of educational programs: Developing new educational programs that meet the needs of industry and modern scientific research trends, including specialized training courses and graduate programs.

9. Community participation: Enhancing community participation by organizing workshops and awareness seminars for farmers and the local community on best practices in animal production.

10. Global impact: Working to achieve global impact by publishing research in prestigious international journals and participating in global conferences to exchange knowledge and experiences.

4. Program Accreditation

The department did not obtain program accreditation, and work was being done to adapt its requirements.

5. Other external influences

Instructions and applicable laws approved by the Ministry of Higher Education and Scientific Research.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	11	16	9.8	
College Requirements	13	44	26.99	
Department Requirements	33	105	64.41	
Summer Training	-	-	-	
Other	–	–	–	

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practical
First	APP1103	Principles of animal production	2	3
First	APP1106	analytical chemistry	2	3
First	APP1101	flat space	2	3
First	APP1104	Principles of soil	2	3
First	APP2110	Principles of field crops	2	3
First	APP2111	Principles of Statistics	2	3
First	APP2108	Plant Protection	2	3
First	APP2107	Principles of poultry	2	3
First	APP2102	organic chemistry	2	3
First	APP2113	general animal	2	3

First	APP3109	English Language -1	1	-
First	APP3105	Arabic Language	1	-
First	APP3112	Freedom , democracy and human rights	1	-
First	APP1114	computer applications-1	1	-
First	APP1115	computer applications-2	1	-
First	APP2116	Mathematics	1	-
second	APP1206	Microbiology Principles	2	3
second	APP1201	animal production mechanization	2	3
second	APP1204	Principles of ichthyology	2	3
second	APP1202	Biochemistry	2	3
second	APP1203	horticultural science	2	3
second	APP2205	Principles of Agriculture guidance	2	3
second	APP2202	animal health products	2	3
second	APP2208	Genetics	2	3
second	APP2209	Forage and pasture crops	2	3
second	APP2210	Fish breeding and production	2	3
second	APP2211	Principles of dairy	2	3
second	APP3212	Agricultural production economics	2	2
second	APP3213	Principles of Microbiology	2	3
second	APP1218	English language**2**	2	3
second	APP1220	computer applications-3	1	-
second	APP1221	computer applications-4	1	-
second	APP2222	Baath crimes	1	-
Third	APP3301	Animal nutrition	2	-
Third	APP3302	Hatching and hatchery	2	3
Third	APP3303	Animal environment and behavior	2	-
Third	APP3304	Design and analysis of experiments	2	3
Third	APP3305	poultry physiology	2	3
Third	APP3306	Technology of Poultry Products	2	-
Third	APP3307	animal diseases	2	3
Third	APP3308	Animal breeding	2	3
Third	APP3309	Reproductive physiology and artificial insemination	2	3
Third	APP3310	Medical and veterinary insects	2	3
Third	APP3311	economics of animal production	1	-

Third	APP3312	animal physiology	2	3
Fourth	APP3401	poultry breeding	2	3
Fourth	APP3402	meat production	2	3
Fourth	APP3403	Sheep and goat production	2	3
Fourth	APP3404	poultry nutrition	2	3
Fourth	APP3405	Management and production of poultry	2	3
Fourth	APP3406	pasture management	2	3
Fourth	APP3407	Graduation Research Project 1	2	3
Fourth	APP3408	poultry diseases	2	3
Fourth	APP3409	Molecular Biology	2	-
Fourth	APP3410	Dairy cow production	2	3
Fourth	APP3411	Meat science	2	3
Fourth	APP3412	buffalo production	2	3
Fourth	APP3413	Seminars	2	3
Fourth	APP3414	Graduation Research Project 2	2	3
Fourth	APP1415	Feed and Diets	2	3

8. Expected learning outcomes of the program

Knowledge

Learning Outcomes Knowledge and Understanding 1. Interaction between practical reality and scientific expertise and providing the best service to society. 2. Possesses the cognitive ability to evaluate agricultural projects in the animal field. 3. Preparing a generation of researchers with scientific and laboratory skills. 4. Learn how to plan projects and find appropriate solutions. 5. Know the physiological changes associated with external influences A6. Introducing students to the skills acquired in the laboratory and linking them to practical reality.	

Skills

Thinking Skills 1. Listening and asking intellectual questions 2. Students participate in preparing scientific lectures 3. 3- Adheres to information and science 4. 4- Presents scientific points of view	

Ethics	
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments	

9. Teaching and Learning Strategies

The education strategy depends on multiple systems, the first of which is the lecture, the methodological and auxiliary book, or the use of directed education or indirect education such as brainstorming, new discoveries, and investigation. As for the learning strategy, it depends on the behaviors and actions taken by the student, as it is the basis of the teaching process and reflects the outcomes of the college and the educational institution.

10. Evaluation methods

1- Through the students' participation in the lecture, based on their prior preparation for the subject.

2- Giving them (an exercise) as a homework assignment and asking them to solve it using separate papers, which they will collect in the next lecture.

3- Giving the students a case study and dividing the students into groups to write a report about that study.

4- Evaluation through monthly examinations.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	Lecturer

Prof.	Animal production	Avian Physiology	PhD. Animal production		1	
Prof.	Veterinary	immunity	PhD. Biology		1	
Prof.	Animal production	Animal reproduction Physiology	PhD. Animal production		1	
Prof.	Animal production	Poultry nutrition	PhD. Animal production		3	
Assist. Prof.	Animal production	Animal Physiology	PhD. Animal production		1	
Assist. Prof.	Animal production	Avian Physiology	PhD. Animal production		3	
Assist. Prof.	Animal production	Meat production	PhD. Animal production		1	
Assist. Prof.	Animal production	Fish breeding	PhD. Animal production		1	
Assist. Prof.	Animal production	Poultry management	PhD. Animal production		1	
Assist. Prof.	Animal production	Fish nutrition	PhD. Animal production		1	
Assist. Prof.	Animal production	Poultry technology	PhD. Animal production		1	
Assist. Prof.	Animal production	Sheep and goat production	PhD. Animal production		1	
Assist. Prof.	Animal production	Poultry nutrition	PhD. Animal production		1	
Teacher	Animal production	poultry Breeding	PhD. Animal production		1	
teacher	Animal	Animal	PhD. Animal		1	

	production	Breeding	production			
Teacher	Animal production	Animal nutrition	PhD. Animal production		1	
Teacher	Animal production	Poultry technology	PhD. Animal production		1	
Teacher	Animal production	Animal reproduction Physiology	MSC. Animal production		1	
Assist. teacher	Animal production	poultry Breeding	MSC. Animal production		1	
Assist. teacher	Animal production	Poultry technology	MSC. Animal production		1	

Professional Development

Mentoring new faculty members

They are directed by putting them in training courses on teaching methods and blended learning and involving them in research teams with teachers with scientific titles.

Professional development of faculty members

By involving them in scientific development courses and workshops to hone their abilities, develop their skills, and encourage them to be creative and publish discreetly in accredited scientific journals and conferences within Scopus and Clarivate libraries.

12. Acceptance Criterion

The student's average in middle school according to the instructions of the student guide annually, as well as the differentiation rate between scientific departments within the college.

13. The most important sources of information about the program

Methodical and helpful books, periodicals, scientific bulletins, and Internet websites specialized in animal production.

14. Program Development Plan

1. Review of the department's academic program: fixed by the sectoral and the Deans' Committee of the College of Agriculture.
2. Setting indicators for learning outcomes standards in the department through academic descriptions of courses and the extent to which course objectives are achieved, in addition to success rates.
3. Comparing the quality of the academic department's program with a corresponding external reference.
4. Investing in the opinions of students and graduates in achieving learning outcomes to improve the department's program. Students' opinions are taken by evaluating the performance of teaching staff and the subjects they teach.
5. The department's procedures for self-evaluation processes, which include the participation of all faculty in the improvement process: The department council and faculty members meet to discuss the department's outcomes annually and work to overcome the obstacles it faces in achieving the department's aims.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level 2023/2024	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
first		Principles of animal production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		analytical chemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		flat space	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Principles of soil	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Principles of field crops	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Principles of Statistics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Plant Protection	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Principles of poultry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		organic chemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√

first		general animal	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		English Language -1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Arabic Language	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Human rights and public	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		computer applications-1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		computer applications-2	Basic	√	√	√	√	√	√	√	√	√	√	√	√
first		Mathematics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Microbiology Principles	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		animal production mechanization	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Principles of ichthyology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Biochemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		horticultural science	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Principles of Agriculture	Basic	√	√	√	√	√	√	√	√	√	√	√	√

second		animal health products	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Genetics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Forage and pasture crops	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Fish breeding and production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Principles of dairy	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		agricultural production economics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Principles of Microbiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		English language**2**	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		freedom and democracy	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		computer applications 3	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Computer applications 4	Basic	√	√	√	√	√	√	√	√	√	√	√	√
second		Baath crimes	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		economics of animal	Basic	√	√	√	√	√	√	√	√	√	√	√	√

third		Animal nutrition	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Hatching and hatchery	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Animal environment and behavior	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Design and analysis of experiments	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		poultry physiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Technology Poultry Products	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		animal diseases	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Animal breeding	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		Reproductive physiology and artificial insemination	Basic	√	√	√	√	√	√	√	√	√	√	√	√
third		animal physiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Third		Medical and veterinary insects	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		poultry breeding	Basic	√	√	√	√	√	√	√	√	√	√	√	√

fourth		meat production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Sheep and goat production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		poultry nutrition	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Management and production of poultry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		pasture management	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Graduation Research Project 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		poultry diseases	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Molecular Biology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Dairy cow production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		meat science	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		buffalo production	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Seminars	Basic	√	√	√	√	√	√	√	√	√	√	√	√
fourth		Graduation Research Project 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√

Fourth		Feed and diets	Basic	√	√	√	√	√	√	√	√	√	√	√	√

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
2. Course Code:
3. Semester / Year:
4. Description Preparation Date:
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Email:
8. Course Objectives

Course Objectives	• ..... • ..... • .....
9. Teaching and Learning Strategies	
Strategy	
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

11. Course Evaluation	
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)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:	
Arabic Language	
2. Course Code:	
APP3105	
3. Semester / Year:	
SEMESTER 2023_2024	
4. Description Preparation Date:	
2024/1/25	
5. Available Attendance Forms:	
Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours 2 units per week	
7. Course administrator's name (mention all, if more than one name)	
Name: mohammed kareem shaker Email: ag.mohammed.kareem@uoanbar.edu.iq	
8. Course Objectives	
1- Preparing students, including the Arabic language 2- Instilling the values of the Arabic language the hearts of students	**3–Assistance in writing scientific research in objective Arabic** **4– Familiarity with Arabic language vocabulary and correct spelling** **5– Knowing the common mistakes**
9. Teaching and Learning Strategies	
Strategy	1- Enabling students to obtain the intellectual framework for the Arabic language subject 2- Preparing students linguistically and educationally 3- A solid knowledge of the Arabic language vocabulary that enables the student formulate Arabic vocabulary 4- Avoid spelling mistakes 5- Correct pronunciation of some vocabulary 6- Expanding cognitive awareness

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding an	Sections of speech	My presence	the exam
2	2	learning	punctuation marks	My presence	the exam
3	2	skills developmen	Common linguistic	My presence	the exam
4	2	Correct spelling	errors	My presence	the exam
5	2	Know the errors	The difference	My presence	the exam
6	2	Knowledge and	between dha and	My presence	the exam
7	2	awareness	dha	My presence	the exam
8	2	Learn to parse	Solar and lunar lar	My presence	the exam
9	2	Learn to parse	The simple and	My presence	the exam
10	2	Knowledge and	marbuta tā’	My presence	the exam
11	2	perception	Number and numb	My presence	the exam
12	2	Learn Arabic	Suspicious actions	My presence	the exam
13	2	Proper	Imperfect verbs	My presence	the exam
14	2	pronunciation	The subject and th	My presence	the exam
15	2	Learn the	predicate	My presence	
		differences	Sound feminine		
		Brief and learn	plural		
		Discrimination	Sound masculine		
		Understanding an	plural		
		perception	The parsing		
		The right style	Discrimination		
			Exception		

11. Course Evaluation

1- Through daily and monthly exams, homework, oral exams, attendance, and class activities.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Arabic language books
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Dairy cow production
2. Course Code:
APP3410
3. Semester / Year:
2st sem. 2023-2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30 h. / 3.5
7. Course administrator's name (mention all, if more than one name)
Name: Ammar Rahem Mansoor Email: ag.ammar.rahem.@uoanbar.edu.iq

8. Course Objectives	
Course Objectives	Identifying global and local cows breeds, methods breeding, care, reproduction, and gen improvement."

9. Teaching and Learning Strategies	
Strategy	"Translate the explanation and clarification, the lecture method, and the practical field lessons."

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	The economic significance of da cattle	Dairy cows production	ppt	Exam.
2	5	Global breeds of dairy cattle	Dairy cows production	ppt	Exam.
3	5	Local cattle breeds	Dairy cows production	ppt	Exam.
4	5	Dairy cattle housing	Dairy cows production	ppt	Exam.
5	5	Managing large-scale dairy farr stations	Dairy cows production	ppt	Exam.
6	5	Field operations in cattle fields	Dairy cows production	ppt	Exam.
7	5	Dairy Cattle Nutrition	Dairy cows production	ppt	Exam.
8	5	Dairy Cattle Nutrition	Dairy cows	ppt	Exam.

			production		
9	5	Dairy cattle reproduction	Dairy cows production	ppt	Exam.
10	5	Milk Production in Cows	Dairy cows production	ppt	Exam.
11	5	Milk Secretion and Processing	Dairy cows production	ppt	Exam.
12	5	Breeding and Improvement of D Cattle	Dairy cows production	ppt	Exam.
13	5	Health Management of Cattle Far	Dairy cows production	ppt	Exam.
14	5	Types of Fixed Cattle Stalls	Dairy cows production	ppt	Exam.
15	5	Dairy Cattle Diseases	Dairy cows production	ppt	Exam.

11. Course Evaluation

Term Tests	Laboratory	Quizzes	Project	Final Exam
30	10	5	5	50

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Dairy cattle production / by Hamid Al-Qudsi and Jiyal Victor Elia / University of Baghdad (2010)
Main references (sources)	-
Recommended books and references (scientific journals, reports…)	-
Electronic References, Websites	-

Course Description Form

1. Course Name:
Sheep and goats production
2. Course Code:
APP3403
3. Semester / Year:
1st sem. 2023-2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30 h. / 3.5
7. Course administrator's name (mention all, if more than one name)
Name: Ammar Rahem Mansoor Email: ag.ammar.rahem.@uoanbar.edu.iq

8. Course Objectives	
Course Objectives	Identifying global and local sheep breeds, method breeding, care, reproduction, and gen improvement."

9. Teaching and Learning Strategies	
Strategy	"Translate the explanation and clarification, the lecture method, and the practical field lessons."

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	The economic importance of she and goats	Sheep and goats production	ppt	Exam.
2	5	Global breed of sheep and goat	Sheep and goats production	ppt	Exam.
3	5	The local breeds of sheep and goa	Sheep and goats production	ppt	Exam.
4	5	Sheep and goats housing	Sheep and goats production	ppt	Exam.
5	5	Sheep and goats farming manager	Sheep and goats production	ppt	Exam.
6	5	Farming operation in sheep and g field	Sheep and goats production	ppt	Exam.
7	5	Feeding sheep and goats	Sheep and goats production	ppt	Exam.
8	5	Feeding sheep and goats	Sheep and goats	ppt	Exam.

			production		
9	5	Reproduction of sheep and goats	Sheep and goats production	ppt	Exam.
10	5	Milk production of sheep and goa	Sheep and goats production	ppt	Exam.
11	5	Wool production	Sheep and goats production	ppt	Exam.
12	5	Breeding of sheep and goats	Sheep and goats production	ppt	Exam.
13	5	Health management of sheep goats farms	Sheep and goats production	ppt	Exam.
14	5	Modern techniques in sheep and g	Sheep and goats production	ppt	Exam.
15	5	Disease of sheep and goats	Sheep and goats production	ppt	Exam.

11. Course Evaluation

Term Tests	Laboratory	Quizzes	Project	Final Exam
30	10	5	5	50

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	"The Production of Sheep and Goats" Mazhar Nafie Al-Sa'ib and Jalal Elia Al-Qasi University of Basra Press (1992)
Main references (sources)	-
Recommended books and references (scientific journals, reports…)	-
Electronic References, Websites	-

Course Description Form

1. Course Name: Meat Production

2. Course Code: APP3402

3. Semester / Year: 2023-2024

4. Description Preparation Date: 25/1/2024

5. Available Attendance Forms: weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

75 h / 5 Unit

7. Course administrator's name (mention all, if more than one name)

Name: Assist. Prof. Hassan Muthana AbdulHameed
Email: ag.hassan.alnori@uoanbar.edu.iq

8. Course Objectives

Knowledge each topics, points and factors affecting the red meat productio marketing and consumption

9. Teaching and Learning Strategies

week- Sources of production of red meat, - Economic and nutritio importance for red meat production , Reality of red meat production a consumption, - Investment meat production efficiency of animals, Composition and descriptions of meat animal carcasses, - Dressing percenta and factors affecting, - Growth and development of meat animals, - Slaugh house and its divisions, - Transport and marketing of animals and carcasses .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	chemical composition of meat	Sources of red meat production and their characteristics		Exam
2	5	Measuring moisture in meat	Economic and nutritional important of red meat production		Exam
3	5	Measuring ash in meat	Reality of red meat production and		Exam

			consumption in Iraq and Arab world		
4	5	Measuring fat in meat	Concepts of meat production		Exam
5	5	Measuring proteins in meat	Biological axes of meat production and how to express them		Exam
6	5	Measuring fiber in meat	Red meat production patterns and factors affecting		Exam
7	5	Measuring physical characteristics in meat	Growth and development of red meat animals		Exam
8	5	Estimation and evaluation techniques of carcass compositions	Factors affecting the growth and development		Exam
9	5	Live weight and carcass weight relationship	First exam		Exam
10	5	Carcasses physical dissection	Efficiency of meat production		Exam
11	5	Carcasses grading and classification	Optimal investment efficiency of meat production		Exam
12	5	Predict equations	Carcass composition, Dressing percentage and factors affecting		Exam
13	5	Students report discussion	Animal and carcasses transport and marketing		Exam
14	5	Students report discussion	Marketing class		Exam
15	5	Second exam	Second exam		Exam

11. Course Evaluation

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)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Main references (sources)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Recommended books and references (scientific journals, reports…)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Electronic References, Websites	

International Society for Behavioral Ecology

1. Course Name:
Animal environment and behavior
2. Course Code:
APP3303
3. Course Code:
Spring Semester / 2023-2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms: weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2
7. Course administrator's name (mention all, if more than one name)
Prof. Salwan Mahmoud Abdel Latif
8. Course Objectives

	Analyzing the behavioral adaptations that evolved animals to face specific environmental challenges. **Studying the responses of animals to environme changes such as seasons and resource availability.** **Exploring group behavior and how environmental fact influence social interactions among animals.**

9. Teaching and Learning Strategies	
	Group work and research projec Utilizing teamwork to devel projects that analyze anin behaviors, which enhanc collaboration and scientific researc Discussion-based learni Organizing classroom discussions deepen understanding and devel critical thinking skills about topics animal behavior.

10. Course Structure					
Learning method	Unit or subject	Required Learning Outcomes	Hours	The week	Cours e

	name				Structure
Scientific Lecture/ Discussion	The basics animal behavior ar its importance	**Introduction to Behavior Biology.**	**2**	1	Evaluation metho
Scientific Lecture/ Discussion	How natura selection shapes behaviors	Animal evolution ar behavior	2	2	Class attendance, discussn and report
Scientific Lecture/ Discussion	Genes, nerves, an hormones	Mechanisms of behavior	**2**	3	Class attendance, discussn and report
Scientific Lecture/ Discussion	How anima learn and memorize information	Learning and memor	2	4	Class attendance, discussn and report
Scientific Lecture/ Discussion	Food Research Strategies and Environmeal Impacts	Nutritional behavior	**2**	5	Class attendance, discussn and report

Scientific Lecture/ Discussion	Mating strategies and caring for offspring	Reproduction behavi	2	6	Class attendance, discussn and report
Scientific Lecture/ Discussion	The impact of the environmen on social interactions	Social behaviors	2	7	Class attendance, discussn and report
Scientific Lecture/ Discussion	How the environmen affects the aggressiveness and defense o the territory	Terriality and aggressiveness	2	8	Class attendance, discussn and report
Scientific Lecture/ Discussion	Migration patterns ar guidance mechanism	Immigration and orientation	2	9	Class attendance, discussn and report
Scientific Lecture/ Discussion	Animals adapt to environmen .al changes	Behavior in changir environments	2	10	Class attendance, discussn and report
Scientifi	Forms and functions o	Communication between animals	2	11	Class attend

c Lecture/ Discussion	communica on				ce, discus n and report
Scientific Lecture/ Discussion	Impact of behavior o conservatio and manageme	Environmental behavior a conservation	2	12	Class attend ce, discus n and report
Scientific Lecture/ Discussion	Behavior analysis tools and techniques	Analysis of anima behavior	2	13	Class attend ce, discus n and report
Scientific Lecture/ Discussion	Presenting and discussing research projects	Review and discus projects	2	14	Class attend ce, discus n and report

11. Class attendance, discussion and report

12. Learning and Teaching Resources	
Required textbooks (methodology, (any	Learning and Teaching Resources
Main references (sources(	Behavioral biology: a study in animal behavior
Recommended books and referenc (scientific journals, reports...)	Fundamentals of Behavioral Biology
Electronic References, Websites	The Ethology of Domestic Animals: An Introductory Text" by Per Jensen

Course Description Form

1. Course Name: Poultry Breeding
2. Course Code: APP3401
3. Semester / Year: Spring Semester / 2023−2024
4. Description Preparation Date: 2024/1/25
5. Available Attendance Forms: weekly
6. Number of Credit Hours (Total) / Number of Units (Total):35/2
7. Course administrator's name (mention all, if more than one name)
Name: Dr. omer khaleed attallah Email: ag.omar.k.attalah@uoanbar.edu.iq Name: Dr. Bakr Tareq Jaber Email: ag.bakartareq@uoanbar.edu.iq
8. Course Objectives

Course Objectives	,Introducing the student the scientific principles and foundations genetically improving and developi breeds to obtain high producti performance and the most importa scientific methods for improving importa economic traits through selection a continuous genetic improvement a preparing an educated cadre familiar w the scientific foundations of managi agricultural animal fields.

9. Teaching and Learning Strategies

Strategy	1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week1	5	Animal improvement societies	Foundations of animal husbandry, introduction to the subject	Lecture	Oral exam
Week2	5	Similarity and contrast, genetic and phenotypic variation	, interaction between environment and heredity	Lecture	Report
Week3	5	Quantitative and qualitative characteristics	Types of attributes and their importance	Lecture	Short exam
Week4	5	Clan inheritance	Clans and their types	Lecture	Report
Week5	5	Educational value	General concepts	Lecture	Short exam
Week6	5	Identical twins are identical twins	Internal education / external education	Lecture	Oral exam
Week7	5	Iterative factor	General concepts	Lecture	Short exam
Week8	5	General concepts	General concepts	Lecture	Report
Week9	5	Genetic selection for quantitative and qualitative traits / methods of selection / types of selection / returns from selection / response associated with selection	/ returns from selection / response associated with selection	Lecture	Report
Week10	5	Election methods	Types and forms of election	Lecture	Oral exam
Week11	5	Embroidery education	Types of election		
Week12	5	Mixing breeds	Types of mixing between breeds	Lecture	Oral exam
Week13	5	Genetic evidence	Genetic evidence/types/use as aids in selection	Lecture	Oral exam
Week14	5	Seminar		Report	

11. Course Evaluation

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

Breeding and improving poultry birds. First edit University of Mosul, College of Agriculture. Univer House for Printing, Publishing and Translation, Prof. Talal Hamid Hassan	Breeding and improving poultry birds. First edition. University of Mosul, College of Agriculture. University House for Printing, Publishing and Translation, Prof. Dr. Talal Hamid Hassan
Main references (sources)	* Research, scientific reports and scientific journals
Recommended books and references (scientific journals, reports…)	Scientific books, scientific periodicals and research

Electronic References, Websites	Modern books are specific to the precise specialty

Course Description Form

1. Course Name:
Design and analysis of experiments
2. Course Code:
APP3304
3. Semester / Year:
first semester/third year2023_2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30 theoretical hours / 3.5 units
7. Course administrator's name (mention all, if more than one name)
Name: Imad Dawood Saleh Email: imaddsaleh@uoanbar.edu.iq

8. Course Objectives	
Course Objectives	**In order to introduce students to the foundations of applying experiments, methods of describing them, and the process of drawing their results according to the type of materials and observations used and preparing them to obtain the extent of the influence of factors on animal characteristics and improve them to obtain the highest production and find solutions to the problems studied.**

9. Teaching and Learning Strategies	
Strategy	**- Learning independently and searching for information independently** **- Building the personality of the scientific researcher in the recipient** **- The ability to identify the problem and find appropriate solutions to it** **- The ability to deduce and interpret** **- Self-development at the professional and specialized levels** **-Work as a team**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
the first	5	Foundations of statistics	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
the second	5	Design and analysis of experiments	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
the third	5	Statistical terms and measures used in designing experiments	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
the fourth	5	For a completely randomized design if the replicates are equal	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Fifth	5	For a completely randomized design if the replicates are not equal	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Sixth	5	Least significant difference (LSD) test	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Seventh	5	Duncan's multinomial test	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Eighth	5	Randomized complete block design	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Ninth	5	Missing value estimation	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
The tenth	5	Measuring the relative efficiency between randomized and block design	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
eleventh	5	Latin square design	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Twelfth	5	The relative efficiency of the Latin square design compared to the random and block designs	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Thirteenth	5	Global experiments	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
fourteenth	5	A two-factor factorial experiment implemented in a completely randomized design	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam
Fifteenth	5	A two-factor factorial experiment applied in a completely randomized block design	Design and analysis of agricultural experiments	Explanation and presentation Model and lecture	the exam

11. Course Evaluation

Monthly exams	Practical exams	Daily exams	Project or report	final exam
40%	10%	-	-	50%

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	- Design and analysis of agricultural experiments, Dr. Khasha Al-Rawi, Mosul / Dar Al-Kutub Foundation for Printing and Publishing - Linear statistical models - Part Two) Analysis of variance and experimental designs (Translated by Anis Ismail Kanjo and others)
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Iraqi scientific and academic journals
Electronic References, Websites	

Course Description Form

1. Course Name: Computer applications 1

2. Course Code: APP1114

3. Semester / Year: First/ 2023−2024

4. Description Preparation Date: 2024/1/25

5. Available Attendance Forms: weekly

6. Number of Credit Hours (Total) / Number of Units (Total) 48/ 3

7. Course administrator's name (mention all, if more than one name)

Name: Asst. Pro. Dr. Ahmed Abdulrahman Majid
Email: ag.ahmed.abd-rahmman@uoanbar.edu.iq

8. Course Objectives

Course Objectives	**1. Learn about computer terms and definitions** **2. University degree in computer history and language** **3. Knowing the computer's components, types, and uses.** **4. Entering the world of viruses and knowing how to benefit from them on the computer.** **5. Working on the computer through the Windows interface**

9. Teaching and Learning Strategies

Strategy	**Knowledge and understanding** Learn about the capabilities of printing, inserting images, tables, storing, and writing formatting. **Subject-specific skills:** Students can develop skills by gaining sufficient experience to produce Microsoft Word files in a sophisticated and artistic style. **Teaching and learning methods:** The student relies for his understanding and learning on in-person lectures during this academic year **Evaluation methods:** Through daily and monthly exams, homework, oral exams, attendance, and various activities **thinking skills:** The student relies on linking the topics of the lectures in order to provide a model answer that can benefit him in the monthly exams. **General and transferable skills (other skills related to employability and personal development).** The student can study the curriculum topics in a practical way to understand and comprehend

	the curriculum lectures through his visit to the laboratory.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3		Computer basics	(theoretical)	Daily exam
2	3		Electronic computer (computer)	(theoretical)	Daily exam + homework
3	3		Classification of computers based on operating system	(theoretical)	Daily exam + homework
4	3		Computer's components	(theoretical)	Monthly exam
5	3		Computer box	(theoretical)	Daily exam
6	3		Ports	(theoretical)	Daily exam + homework
7	3		Number systems	(theoretical)	Daily exam + homework
8	3		Computer security and software licenses	(theoretical)	Monthly exam
9	3		Electronic hacking	(theoretical)	Daily exam
10	3		Operating Systems	(practical)	Daily exam + homework
11	3		Windows operating system	(practical)	Daily exam + homework
12	3		Taskbar	(practical)	Monthly exam
13	3		Performing operations on windows	(practical)	Daily exam
14	3		control Board	(practical)	Daily exam + homework
15	3		Add an account	(practical)	Daily exam + homework
16	3		Installing programs	(practical)	Monthly exam

11. Course Evaluation

Monthly exam 60%, daily exam 20%, homework 10%, attendance 10%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer applications book Microsoft Word
Main references (sources)	**My practical experience is in the computer field**
Recommended books and references (scientific journals, reports…)	-
Electronic References, Websites	-

Course Description Form

1. Course Name: Computer applications 2

2. Course Code: APP1115

3. Semester / Year: second/ 2023−2024

4. Description Preparation Date: 2024/1/25

5. Available Attendance Forms: weekly

6. Number of Credit Hours (Total) / Number of Units (Total) 48/ 3

7. Course administrator's name (mention all, if more than one name)

Name: Asst. Pro. Dr. Ahmed Abdulrahman Majid
Email: ag.ahmed.abd-rahmman@uoanbar.edu.iq

8. Course Objectives

Course Objectives	**1. Knowing how to operate Microsoft Word** **2. Study the basic principles of using the mouse and keyboard** **3. Study how to work on Microsoft Word** **4. Learn how to store files in Microsoft Word format**

9. Teaching and Learning Strategies

Strategy	**Knowledge and understanding** Learn about the capabilities of printing, inserting images, tables, storing, and writing formatting. **Subject-specific skills:** Students can develop skills by gaining sufficient experience to produce Microsoft Word files in a sophisticated and artistic style. **Teaching and learning methods:** The student relies for his understanding and learning on in-person lectures during this academic year **Evaluation methods:** Through daily and monthly exams, homework, oral exams, attendance, and various activities **thinking skills:** The student relies on linking the topics of the lectures in order to provide a model answer that can benefit him in the monthly exams. **General and transferable skills (other skills related to employability and personal development).** The student can study the curriculum topics in a practical way to understand and comprehend the curriculum lectures through his visit to the laboratory.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3		Turning The Calculator On And Off	(practical)	Daily exam
2	3		Learn About Windows Principles	(practical)	Daily exam + homework
3	3		How To Run Microsoft Word	(practical)	Daily exam + homework
4	3		File Tab Details	(practical)	Monthly exam
5	3		Home Tab Details	(practical)	Daily exam
6	3		Insert Tab Details	(practical)	Daily exam + homework
7	3		Page Layout Tab Details	(practical)	Daily exam + homework
8	3		References Tab Details	(practical)	Monthly exam
9	3		Messages Tab Details	(practical)	Daily exam
10	3		Review Tab Details	(practical)	Daily exam + homework
11	3		View Tab Details	(practical)	Daily exam + homework
12	3		Details Tab Design In The Table	(practical)	Monthly exam
13	3		Layout Tab Details In The Table	(practical)	Daily exam
14	3		Format Tab Details In Image	(practical)	Daily exam + homework
15	3		Abbreviations In The Program	(practical)	Daily exam + homework
16	3		Professionalism Using The Program	(practical)	Monthly exam

11. Course Evaluation

Monthly exam 60%, daily exam 20%, homework 10%, attendance 10%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer applications book Microsoft Word
Main references (sources)	**My practical experience is in the computer field**
Recommended books and references (scientific journals, reports…)	-
Electronic References, Websites	-

Course Description Form

1- Course Name:	
Feed and Diets	
2- Course Code:	
APP3415	
3- Semester / Year:	
2023− 2024 / Spring	
4- Description Preparation Date:	
25/1/2024	
5- Available Attendance Forms:	
Weekly	
6- Number of Credit Hours (Total) / Number of Units (Total)	
75	
7- Course administrator's name (mention all, if more than one name)	
Name: Baraa Hameed Mousa Email: ag.baraa.hameed@uoanbar.edu.iq	
8- Course Objectives	
Course Objectives	Course aims to teach students how to identify, prepare, and evaluate suitable feeds and diets for different animals. It educates students about the components of various feeds, such as grains, green fodder, proteins, vitamins, and minerals, and how to properly prepare and blend these components to meet the energy, protein, and other nutritional needs of agricultural animals. Additionally, students learn how to assess the quality of feeds and diets and their impact on the health and productivity of animals. They also acquire knowledge about the different nutritional requirements of animals at different stages of their lives and under different rearing conditions.
9- Teaching and Learning Strategies	
Strategy	Attendance and electronic education

10- Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
One	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Nutrition	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	feed and their classification	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	chemical composition of feed materials	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	silage	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	unconventional feeds	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Six	5	a. Cognitive skills	methods of measuring	Attendance /	a. Daily and

		b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	the nutritional value of feed materials	electronic	monthly exams b. Reports c. homework
Seven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	The first exam	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	energy	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	factors affecting feed digestion consumed and influencing factors	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	parameters affecting the nutritional value	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Eleven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the	carbon-to-nitrogen balance	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

		Internet e. Communication and Connection skills			
Twelve	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	nutritional requirements	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
thirteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Nutrition Requirement	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Non-Protein Nitrogen (NPN)	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Fifteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Second exam	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Animal Food and Nutrition - Written by Dr. Ali Al-Atar and Dr. Farouk Habib. 1986.
Main references (sources)	Nutrition Science - Written by Dr. Jamal Abdul Rahman and Dr. Shaker Al-Atar. Printed at Al-Dar Al-Jami'a Press, Baghdad, 2014.
Recommended books and references (scientific journals, reports…)	1. Quantitative Aapects of Ruminant

	Digestion & Metabolism, 2005. 2nd Edition J.Djkstra , J.M. Forbes & J.France uk & Chambridge. 2. Animal Feeding & Nutrition. 1982. Marshall H. Jurgens 5th Edition Iowa state University.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=371

Course Description Form

1- Course Name:
Economics of animal Prodaction
2- Course Code:
APP3311
3- Semester / Year:
First /2023−2024
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
regularity (attendance)
6- Number of Credit Hours (Total) / Number of Units (Total)
30 Hour / 3 unit
7- Course administrator's name (mention all, if more than one name)
Name: Majid Abed Hamza Email: majid.abed@uoanbar.edu.iq
8- Course Objectives

Course Objectives	1- The student knows the concept of economics and economic activity 2-The student understands the concept of demand, the law of demand, the concept of supply and their elasticities 3-The student knows the concept of production theory and consumer theory 4- The student should know the concept of costs, production, and the best production level 5- The student understands the meaning of revenue and its types • 6- The student should know the con of markets and their types

9- Teaching and Learning Strategies

Strategy	Clarifying the concept of economics, methods of economic analysis, the conc of demand, the law of demand and its elasticities, the factors affecting it, concept of supply and their elasticities, clarifying the theory of production, theory of consumer behavior, the theory of costs, the concept of revenue and types, and addressing the concept of markets, their types, and characteristics of each market

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	5	Knowledge and understanding Skill for the subject	The concept of economics its branches and relationship to other scie and methods of research	theoretically Practical vocabulary Subject	Examination, reporting
2	5	Knowledge and understanding Skill for the subject	The concept of econo needs and their characteris as well as the concept economic activities and circular flow of income	theoretically Practical vocabulary Subject	Examination, reporting
3	5	Knowledge and understanding Skill for the subject	Demand, its concept, function and demand cu and the exceptions to this l	theoretically Practical vocabulary Subject	Examination, reporting
4	5	Knowledge and understanding Skill for the subject	Factors affecting demand, concept of elasticity, ty degrees and uses of elastic of demand	theoretically Practical vocabulary Subject	Examination, reporting
5	5	Knowledge and understanding Skill for the subject	Supply its concept, law, cu and schedule of supply, elasticity and the fac affecting it	theoretically Practical vocabulary Subject	Examination, reporting
6	5	Knowledge and understanding Skill for the subject	The theory of consu behavior and its analysis the concept of consu equilibrium according to classical theory	theoretically Practical vocabulary Subject	Examination, reporting
7	5	Knowledge and understanding Skill for the subject	The modern theory or theory of indifference curv	theoretically Practical vocabulary Subject	Examination, reporting
8	5	Knowledge and understanding Skill for the subject	production factors	theoretically Practical vocabulary Subject	Examination, reporting
9	5	Knowledge and understanding Skill for the subject	Cost theory and the concep costs of all kinds	theoretically Practical vocabulary Subject	Examination, reporting
10	5	Knowledge and understanding Skill for the subject	The law of diminishing ret is understood and evaluate	theoretically Practical vocabulary Subject	Examination, reporting
11	5	Knowledge and understanding Skill for the subject	Revenue and its types	theoretically Practical vocabulary Subject	Examination, reporting
12	5	Knowledge and understanding Skill for the subject	Markets concept and types	theoretically Practical vocabulary Subject	Examination, reporting
13	5	Knowledge and understanding	Perfectly competitive ma conditions and equilibrium	theoretically Practical	Examination, reporting

		Skill for the subject		vocabulary Subject	
14	5	Knowledge and understanding Skill for the subject	Monopolistic competition oligopoly	theoretically Practical vocabulary Subject	Examination, reporting
15	5	Knowledge and understanding Skill for the subject	Monopoly market producer equilibrium	theoretically Practical vocabulary Subject	Examination, reporting

11- Course Evaluation

Daily exam 5 marks, semester exam 40 marks, submission of report 5 marks, final exam 50 marks (total 100)

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1- Dr. Sami Al-Sayed, "Principles of Economics 2- Dr. Abdul Karim Mahdi Al-Hasnawi, "Principles of Economics" 3- Dr. Mohsen Hassan Al-Mamouri, "Principles Economics" 4- Dr. Rania Mahmoud Abdel Aziz Ama "Principles of Economics
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1- Course Name: organic chemistry
2- Course Code: APP2102
3- Semester / Year:2023/2024
4- Description Preparation Date:2024/1/25
5- Available Attendance Forms: Weekly attendance
6- Number of Credit Hours (Total) / Number of Units (Total) 75 h.
7- Course administrator's name (mention all, if more than one name)
Name: Prof.Dr. Husam H. Nafea Email: ag.husam.nafea@uoanbar.edu.iq Name: Dr. Maher Ahmed Abed
8- Course Objectives

Course Objectives	**Introducing students to the concept of organic chemistry, its sources and properties.** **• Introducing students to the difference between inorganic and organic chemistry.** **• Recognize the importance of chemistry** **• Identifying organic compounds, their classification and the types of their bonds.** **• Identifying of preparing organic compounds and their interactions, as well as their chemical and physical properties.**

9- Teaching and Learning Strategies

Strategy	a. To familiarize the student with the concept of organic chemistry. b. The student should classify the sources of organic chemistry. c. The student should determine the difference between organic chemistry and other branches of chemistry. d. That the student understand the concept of hydrocarbons, their interactive behavior and their features, develop the student's skills

	in determining their families and functional groups of their compounds.

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week1	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Definition of chemistry and bonds and their dissolution + preparation of cyclohexane and identification of the distillation device	Lecture	Oral exam
Week2	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Saturated Hydrocarbons (alkanes) + tert-butyl preparation	Lecture	Report
Week3	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	unsaturated hydrocarbons (Alkenes) + the experience and behavior of alcohols phenols	Lecture	Short exam
Week4	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Mechanical addition to the interior + preparation of acetone	Lecture	Report
Week5	5	Unsaturated compounds containing more than one double bond + preparation behavior of aldehydes and ketones +First Exam			
Week6	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Aromatic compounds + unknown substance identification test	Lecture	Oral exam
Week7	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and	Aromatic reactions: halogenation, alkylation,	Lecture	Short exam

		Internet skills e.ommunication Connection skills	sulfonation and nitration + preparation of benzoic acid.		
Week8	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Aromatic aliphatic halides + ether acetate preparation	Lecture	Oral exam
Week9	5	Review	Alcohols and phenols + preparation of aspirin	Lecture	Short exam
Week10	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Ethers + soap preparation	Lecture	Report
Week11	5	Aldehydes and ketones +Second Exam			
Week12	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Carboxylic acids + preparation of cellulose acetate	Lecture	Oral exam
Week13	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	carboxylic acid derivatives Esters + Disclosure of a substance for each student separately	Lecture	Oral exam
Week14	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Halides and anhydrides of carboxylic acids + transactions of acid anhydrides	Lecture	Report
Week15	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Amines + interactions of formation of amines	Unsaturated compounds containing more than one double bond + preparation and	

				behavior of aldehydes and ketones +First Exam	

11- Course Evaluation

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)	a. Practical organic chemistry lectures - Basic Sciences Division - College of Agriculture - University of Baghdad. b.Organic Chemistry, 4th ed. Allyn and Bacon Inc. Boston, USA. c.Louis F. Fieser, Kenneth, I. Williamson (1983). Organic Experiments, 5th ed . d.Walter W. Linstromberg and Henry E. Baumgarten(1983).Organic Experiments, 5th ed
Main references (sources)	a.Al-Fattah Youssef Ali (1989). Foundations of organic chemistry. A curriculum for students of the Faculty of Agriculture and Life Sciences. Ministry of Higher Education. University of Baghdad, House of Wisdom.
Recommended books and references (scientific journals, reports…)	a. Giving some awareness and educational lectures to students. b.visits to see the college farms of laying hens and broiler and the diets factories in the governorate
Electronic References, Websites	a. Recent studies and studies. b. The Internet of Information (Internet)

Course Description Form

1- Course Name:
Animal Diseases
2- Course Code:
APP3307
3- Semester / Year:
Second Semester 2023_2024
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Weekly attendance and electronic
6- Number of Credit Hours (Total) / Number of Units (Total)
75 hr 3 units
7- Course administrator's name (mention all, if more than one name)
Name: Hasan Ali Mutar Email: ha.anbuniv@uoanbar.edu.iq
8- Course Objectives

Course Objectives Students learn understand the basic principles of anin pathology, its classifications, and its impa on animal production Learn how to study the emergence diseases, ways of transmission betwe animals, and the extent of their spread a epidemiology. Study of the most important diseas common to humans and animals and th danger to public health Classification of important diseases th affect livestock and affect the anin economy	• ….. • **View the most important vaccination programs against epidemic diseases among farm animals** • **See the most important methods managing modern animal fields avoid disease infections**…… • …..

9- Teaching and Learning Strategies	
Strategy	Exercising students on the skills acquired in the animal field and learning about the practical aspect. * Linking theoretical information to practical reality and applying it on th ground.

	* Giving the student the opportunity to evaluate animals and examine the health, especially in major projects and fields. Laboratory Learns to manage modern health programs for farm animals. * Learning to isolate and monitor the behavior of sick animals for the purpose of avoiding transmission of infection * Review of modern pharmaceutical products used in vaccines and medicines for farm animals * Preparing the student practically for the purpose of mastering the skills forecasting and general examination of the health of farm animals a enabling them to perform various examinations in particular

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	The student learns ab signs of health and illn in animals and methods measuring pulse a temperature	Introductio n to the concept of disease and general animal health	My presence	a. Daily and monthly exams b. Reports c. homework
2	5	The student will be familiar with the methods of classifying animal diseases	Classification of diseases and their causes	My presence	a. Daily and monthly exams b. Reports c. homework
3	5	The concept of infectious and non-communicable diseases	Classification of diseases and their causes	My presence	a. Daily and monthly exams b. Reports c. homework

4	5	Describe the causes of bacterial, viral, fungal and parasitic diseases	Various pathogens	My presence	a. Daily and monthly exams b. Reports
5	5	The concept of immunity and its types	Introduction to immunology My presence	My presence	a. Daily and monthly exams b. Reports
6		First month exam			
7	5	The concept of immunization and the types of killed and live vaccines against diseases. Personal skills	Introduction to immunology	My presence	a. Daily and monthly exams b. Reports
8	5	Identify the most important methods of diagnosing diseases.	Pathological diagnoses	My presence	a. Daily and monthly exams b. Reports c. homework
9	5	The most important infectious diseases in farm animals	Introduction to animal diseases	My presence	a. Daily and monthly exams b. Reports
10	5	Non-communicable diseases in livestock fields	Animal diseases	My presence	a. Daily and monthly exams b. Reports

11	5	Identify the most important diseases of the digestive system and their causes	Internal diseases	My presence	a. Daily and monthly exams b. Reports c. homework
12		Second month exam			
13	5	Identify the most important respiratory diseases in farm animals	Respiratory diseases	My presence	a. Daily and monthly exams b. Reports c. homework
14	5	Identify the most important diseases of sheep	Introduction to ruminant diseases	My presence	a. Daily and monthly exams b. Reports
15	5	Identify the most important diseases common between humans and animals	Introduction to joint diseases	My presence	a. Daily and monthly exams b. Reports

11- Course Evaluation

a. Theoretical exams.
b. Practical exams
c. Interactive direct questions.
d. Reports and homework.

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	1 Animal Diseases (1990). Higher Education Press, University of Baghdad . 2 - International Information Network th Internet_ 3- Common diseases between humans ar animals, Abdul Basit Sayed 2018

Main references (sources)	_Veterinary Medicine: A Textbook of the Diseases of Cattle, Horses, Sheep, Pigs, and Goats, 11th edition, Volumes 1 and 2 Reviewed by Cathy Patterson, DVM 2017
Recommended books and references (scientific journals, reports…)	_Cattle medicine. Scott,Philip R.,McCrae 2011. _Iraqi scientific journals, especially the Journal of the College of Veterinary Medicine, Mosul
Electronic References, Websites	https://yos-study.com/%D8%A7%D9%84%D8%B7%D8%A8-%D8%A7%D9%84%D8%A8%D9%8A%D8%B7%D8%B1%D9%8A-veterinerlik

Course Description Form

1- Course Name: **buffalo production**

2- Course Code: APP 3412

3- Semester / Year: second \ 2023-2024

4- Description Preparation Date:2024/1/25

5- Available Attendance Forms: weekly

6- Number of Credit Hours (Total) / Number of Units (Total) 35 hours 2 unite

7- Course administrator's name (mention all, if more than one name)

Name: Dr.thair Rasheed Mohammed
Email: ag.thair.rasheed@uoanbar.edu.iq
Name: Dr. Osama A. Saeed
Email: osama_anwr85@uoanbar.edu.iq

8- Course Objectives

Course Objectiv	• **Teaching students the basics about international and Iraqi buffalo breeds** • **Teaching students about the parts of the male and female reproductive system o buffalo and the functions and importance of each part** • **Teaching students about the most important challenges of breeding buffalo** • **Teaching students about the way of living, feeding and breeding buffalo**

9- Teaching and Learning Strategies

Strategy	1. Active learning 2. Cooperative learning 3. Discussions 4. Reports

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2	a lecture PowerPoint	Economic importance of the buffalo breeding an production	Study the economic importance of local buffalo	Quizzes
2	2	a lecture PowerPoint	Buffalo classification wit the animal kingdom , The most important breeds of domesticated buffalo in the world	Knowing the type of local and International buffalo breeds	Quizzes
3	2	a lecture PowerPoint	Buffalo housing	Study the types o buffalo housing and their accessories	Quizzes
4	2	a lecture PowerPoint	Meat production in the buffalo	Study of the nutritional value of buffalo meat and its economic importance	Quizzes
5	2	a lecture PowerPoint	Milk production in the buffalo	Study the components of buffalo milk and ways to increase	Written tests and essay questions
6	2	a lecture PowerPoint	First exam	Exam	Written tests and essay questions
7	2	a lecture PowerPoint	Milk replacers, early weaning of buffalo calve and the suckling system	Studying how to conduct early weaning and feeding weaned buffalo calves	Quizzes

8	2	a lecture PowerPoint	Feeding and feeding system in buffalo	Study of types of buffalo diets and diets	Quizzes
9	2	a lecture PowerPoint	Reproduction in buffalo	Studying the type of reproductive cycles in buffalo and methods of increasing fertility	Quizzes
10	2	a lecture PowerPoint	Estrus synchronization i buffalo and pregnancy diagnosis	Knowledge of techniques for Estrus synchronization and increasing births	Quizzes
11	2	a lecture PowerPoint	Care of buffalo Calves	Learn about ways care for buffalo calves	Quizzes
12	2	a lecture PowerPoint	Second exam	Exam	Written tests and essay questions
13	2	a lecture PowerPoint	Common Infectious diseases in buffalo	Identify diseases that affect buffal and methods of prevention	Quizzes
14	2	a lecture PowerPoint	Different Management systems in buffalo	Learn about buffalo field management	Quizzes
15	2	a lecture PowerPoint	Challenge facing buffalo breeding in Iraq and way to improve it	Study of the obstacles facing buffalo farming	Quizzes
11- Course Evaluation					

Final Exam 50 % Project 0% Quizzes5% Laboratory 0% Term Tests 45 %	

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	**تربية ورعاية الجاموس/د. عادل سيد أحمد البربري 2007** **دليلك الى تربية الأبقار والجاموس/د. مصطفى فايز 2013**
Main references (sources)	**أنتاج الماشية/د. ناطق حميد القدسي و د. أشواق عبد و السيد:** **جيآل فكتور2012**
Recommended books and references (scientific journals, reports…)	**Pathway to pregnancy and parturition by senger** **Applied Animal Endocrinology. By E.S. Squires**
Electronic References, Websites	**ابحاث ودوريات في التخصص**

Course Description Form

1- Course Name:
Fish breeding and production
2- Course Code:
APP2210
3− Semester / Year:
Spring Semester / 2023-2024
4− Description Preparation Date:
25/1/2024
5- Available Attendance Forms:
Weekly
6- Number of Credit Hours (Total) / Number of Units (Total)
75 Hours / 3.5
7- Course administrator's name (mention all, if more than one name)
Dr. Ahmed S. Naser Email: asnaser@uoanbar.edu.iq Dr. Hazem S. Abdulhameed
8− Course Objectives
1. Definition of students to raise fish, departments, types, and different branches. 1. Definition of students with the types of fish education, the characteristics of each, and how to take advantage of them. 2. Definition and knowledge of students in the appropriate environment for fisheries growth and functional methods. 3. Definition of students in ways to proliferate different fish. 4. Definition of students how to take advantage of fisheries and increase their production in the correct scientific ways. 5. Definition of students with design and planning skills for establishing fish farms according to scientific and practical foundations for this science. 6. Skills in disease diagnosis and dealing with various education problems. Calculate the design and maintenance of fish education and production proje according to modern scientific methods.
9− Teaching and Learning Strategies
Lectures/illustrations/diagrams/ educational videos/ educational commitment of students in the lecture and educational institution
10− Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	**Introduction to fish farming**	Aquaculture systems	Scientific lecture	Class attendance/discussion/report
2	5	**Systems used in fish breeding and production**	Aquatic environment and its classification	Scientific Lecture	Class attendance/discussion/report
3	5	Design and construction of earthen fish breeding and production ponds, cages, closed systems, etc	Types of economic fish and the differences between them	Scientific Lecture	Class attendance / discussion / report
4	5	The aquatic environment and its impact on fish production and growth	Fish farming in different systems	Scientific Lecture	Class attendance / discussion / report
5	5	Chemical properties Of Fish culture	How to design and create breeding systems/cages	Scientific Lecture	Class attendance / discussion / report
6	5	The aquatic environment and its impact on fish production and growth	Natural food/processed food	Scientific Lecture	Class attendance / discussion / report
7	5	Physical characteristics	Quality specifications for fish farming water and how to measure them	Scientific Lecture	Class attendance / discussion / report
8	5	Management of fish breeding and production ponds	Calculating fish needs	Scientific Lecture	Class attendance / discussion / report
9	5	Food and nutrition for breeding fish	Breeding and improving fish	Scientific Lecture	Class attendance / discussion / report

10	5	Natural food/processed food Semester exam	Semester exam	Scientific Lecture	Class attendance / discussion / report
11	5	Energy, growth, and nutrient needs of fish and how to calculate them	Calculating fish needs	Scientific Lecture	Class attendance/discussion / report
12	5	Formulation and manufacture of diets and development of feeding plans	Feeding methods	Scientific Lecture	Class attendance/discussion/report
13	5	Feeding methods	Exams	Scientific Lecture	Class attendance/discussion / report
14	5	Fish reproduction/natural reproduction Fish -artificial propagation	General Review	Scientific lecture	Class attendance/discussion/report

11- Course Evaluation

daily tests / Monthly tests / Questions and discussion in lectures
Scientific Reports / Attending lectures

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Scientific books, scientific periodicals, and research
Recommended books and references (scientific journals, reports...)	Modern books for the precise specialization
Electronic References, Websites	Reputable scientific sites

Course Description Form

1- Course Name:	
Animal Nutrition	
2- Course Code:	
APP3301	
3- Semester / Year:	
2023_ 2024	
4- Description Preparation Date:	
2024/1/25	
5- Available Attendance Forms: attendance	
6- Number of Credit Hours (Total) / Number of Units (Total)	
75	
7- Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr Dhafer Thabet Muhammad Email: ag.thafer.thabit@uoanbar.edu.iq Assist.Prof. Dr. Zaid Jamil Muhammad Saeed	
8- Course Objectives	
Course Objectives	• **Researches how to feed the animal from birth to the end production** • • **Animal nutrition includes how to design and create diets** • • **Identifying the types of foodstuffs used in animal nutrition a calculating their needs according to type, age and product status**
9- Teaching and Learning Strategies	
Strategy	Understanding teaching and learning strategies is an importa foundation for improving the teaching process and achieving success in achieving educational goals. Here are some important strategies in this regard: Collaborative learning: This approach encourages collaborati among students by working together in small groups to solve problems and complete projects. This allows for the exchange

of knowledge and ideas and enhances social skills.

Activity learning: This approach focuses on engaging student in effective and interactive activities such as discussions, hands-on experiments, and educational games. This techniqu helps to enhance interaction, focus and enhance material understanding.

Learning Responsibility: This approach is based on motivatin students to take responsibility for their learning by setting personal goals and regularly evaluating their progress.

Guided learning: This approach includes guiding students directly by the teacher, guiding them through the educational process, and providing feedback and guidance to improve the understanding.

Problem-based learning: This approach is based on presentin real-life problems or scenarios to students and motivating them to research and solve problems using the knowledge th have acquired.

Self-learning: This approach encourages students to develop critical and analytical thinking and self-assessment skills by thinking about and evaluating their own methods of learning regularly.

Experiential learning: This approach involves conducting experiments and practical experiments as part of the learning process, helping students understand concepts more deeply and apply them in practice.

There are many other strategies that can be used in teaching and learning, and the appropriate strategy depends on the teacher's specific goal, the needs of the students and the natu of the subjects taught.

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Skills of dealing with	**Definition of nutrition,**	Electronic	Daily exams,

		the information network and the Internet	**water, organic matte**	attendance education	homework and reports
1	2	Skills of dealing with the information network and the Internet	**Proteins and amino acids**	Electronic attendance education	Daily exams, homework and reports
2	2	Skills of dealing with the information network and the Internet	**Essential and non-essential amino acids**	Electronic attendance education	Daily exams, homework and reports
3	2	Skills of dealing with the information network and the Internet	**Virtual and true digestibility coefficient of protein**	Electronic attendance education	Daily exams, homework and reports
4	2	Skills of dealing with the information network and the Internet	**Concentrated feed and coarse feed.**	Electronic attendance education	Daily exams, homework and reports
5	2	Skills of dealing with the information network and the Internet	**Minerals, vitamins and food additives**	Electronic attendance education	Daily exams, homework and reports
6	2	Skills of dealing with the information network and the Internet	Bioenergy and its transformations	Electronic attendance education	Daily exams, homework and reports
7	2	Skills of dealing with the information network and the Internet	Nitrogen level	Electronic attendance education	Daily exams, homework and reports
8	2	Skills of dealing with the information network and the Internet	Nutritional fat and body fat	Electronic attendance education	Daily exams, homework and reports
9	2	Skills of dealing with the information network and the	Ketosis	Electronic attendance education	Daily exams, homework and reports

		Internet			
10	2	Skills of dealing with the information network and the Internet	Enzymatic digestion of protein	Electronic attendance education	Daily exams, homework and reports
11	2	Skills of dealing with the information network and the Internet	Nutritive Value	Electronic attendance education	Daily exams, homework and reports
12	2	Skills of dealing with the information network and the Internet	Lipids Digestion in Grass/roughage eater	Electronic attendance education	Daily exams, homework and reports
13	2	Skills of dealing with the information network and the Internet	Fat of Feed and Body	Electronic attendance education	Daily exams, homework and reports
14	2	Skills of dealing with the information network and the Internet	Proteins and Amino Acids	Electronic attendance education	Daily exams, homework and reports
15	2	Skills of dealing with the information network and the Internet	Proteins and Enzymes	Electronic attendance education	Daily exams, homework and reports

11- Course Evaluation

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)	Nutrient Requirements of Domestic Animals" fr
Main references (sources)	the National Research Council (NRC).
Recommended books and references (scientific journals, reports…)	"Animal Nutrition" author Peter McDonald.
Electronic References, Websites	"Applied Animal Nutrition: Feeds and Feeding" Peter McDonald, David Pethick, Ron Thompson, and Colin Anderson.
	"Small Animal Clinical Nutrition" Aut Michael S. Hand, Craig D. Thatch

	Rebecca L. Remillard, Philip Roudebu and Bruce J. Novotny

Course Description Form

1- Course Name:
Poultry Nutrition
2- Course Code:
APP3404
3- Semester / Year:
2023− 2024 / Autumn
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Attendance
6- Number of Credit Hours (Total) / Number of Units (Total)
75
7- Course administrator's name (mention all, if more than one name)
Name: Baraa Hameed Mousa Email: ag.baraa.hameed@uoanbar.edu.iq Name: Prof.Dr. Husam H. Nafea Email: ag.husam.nafea@uoanbar.edu.iq
8- Course Objectives

Course Objectives	• The objectives of teaching the subject of Avian Physiology are related to providing knowledge and a deep understanding of the processes and functions of the body and physiological systems of poultry. This subject aims to equip students with the necessary knowledge to comprehend how the avian body functions at the cellular, tissue, organ, and system levels.

9- Teaching and Learning Strategies

Strategy	Attendance and electronic education

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

One	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Energy	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Energy resources	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Energy calculation	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Proteins	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Energy: protein ratio	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
six	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information	Nitrogen balance	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework

		network and the Internet e. Communication and Connection skills			
seven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	The first exam	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Industrial amino acids	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Vitamins	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Inorganic salts	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
elever	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	water	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Twelv	5	a. Cognitive skills b. Intellectual skills	Digestive system of poultry	Attendance/ / electronic	a. Daily and monthly exams

		c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills			b. Reports c. homework
thirtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Digestive enzymes and endocrine glands	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	digestion	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fifteer	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Second exam	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Nutrition of Poultry" by Dr. Ali Abdul Khaleq Al-Yasen and Dr. Mohammed Hassan Abdul Abbas, 2010.
Main references (sources)	1. Quantitative Aapects of Ruminant Digestion & Metabolism, 2005. 2nd Edition J.Djkstra , J.M. Forbes & J.France uk & Chambridge. 2. Animal Feeding & Nutrition. 1982. Marshall

	Jurgens 5th Edition Iowa state University.
Recommended books and references (scientific journals, reports…)	Nutrition and Metabolism. Second Edition. Su A Lanham-New, Ian A Macdonald, Helen Roche. John Wiley & Sons, Ltd., Publicati 2019.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=371

Form

1- Course Name:
Hatching and Hatchery
2- Course Code:
APP3302
3- Semester / Year:
2023– 2024 / Spring
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Attendance
6- Number of Credit Hours (Total) / Number of Units (Total)
75
7- Course administrator's name (mention all, if more than one name)
Name: Adel Abdullah Yousif Email: ag.dr.alhamdani@uoanbar.edu.iq

8- Course Objectives	
Course Objectives	• Providing students with detailed knowledge about the process of egg incubation, including the stages of incubation and the appropriate temperature and humidity conditions for successful hatching. Introducing students to different types of incubators and their equipment. Understanding the factors influencing the success of incubation and emphasizing the importance of health care practices for hatched chicks, including disease prevention, providing appropriate nutrition, and overall health care.

9- Teaching and Learning Strategies	
Strategy	Attendance and electronic education

10- Course Structure

Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation

		Outcomes		method	method
One	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	importance of egg incubation in poultry industry.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Preparing eggs for incubation.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Selecting suitable eggs for incubation.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Storing eggs prior to placement in the incubator.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Maintaining cleanliness of hatching eggs.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
six	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the	Stages of egg incubation.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework

		information network and the Internet e. Communication and Connection skills			
Seven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Types of incubators and their equipment.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	First exam.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Essential equipment in incubators and proper usage.	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Factors for the success of the incubation process.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Eleven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Egg quality and health.	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Twelve	5	a. Cognitive skills	Prevention of diseases and	Attendance/ /	a. Daily and

		b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	infections.	electronic	monthly exams b. Reports c. homework
thirteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Providing appropriate nutrition for the hatchlings.	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	General healthcare and hygiene.	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Fifteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Second exam.	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	1."Poultry Production and Hatchery Management" by Dr. G. J. Blair. 2."Poultry Science, Chicken Culture: A Partial Alphabet" by Susan Merrill Squier. 3. "Poultry Science" by Colin G. Scanes.
Main references (sources)	"Hatchery Technology: A Guide to Chicken Egg Incubation and Hatchery Management" by Dr. Nadeem Mirza.
Recommended books and references (scientific journals, reports…)	1. "Hatchery Management" by R. N. Singh and M. L. Saha.

	2."Hatchery Management Guide for Game B and Small Poultry Flock Owners" by Dr. Ke Bramwell.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=358

Course Description Form

1- Course Name: Technology of poultry products
2- Course Code: APP3306
3– Semester / Year: second/ 2023–2024
4– Description Preparation Date: 2024/1/25
5- Available Attendance Forms: Personal weekly
6- Number of Credit Hours (Total) / Number of Units (Total) 80/ 3
7- Course administrator's name (mention all, if more than one name)
Name: Asst. Pro. Dr. Ahmed Abdulrahman Majid Email: ag.ahmed.abd-rahmman@uoanbar.edu.iq
8– Course Objectives

Course Objectives	• **Study the components of eggs and their importance to humans** • **Teach the student to measure the qualitative characteristics of eggs.** • **Study the components of meat and its importance to humans** • **Teach the student to measure and store meat quality**
9– Teaching and Learning Strategies	
Strategy	**Knowledge and understanding** The quality of any food product is defined as a set of characteristics that control the degree of consumer acceptance or rejection of that food product. **Subject-specific skills:** After the birds arrive at the slaughterhouse, the workers hang the birds on a moving chain from the legs, with the head hanging down, and several operations are performed on them. **Teaching and learning methods:** The student relies for his understanding and learning on electronic lectures during this academic year, such as classroom and meet **Evaluation methods:** Through daily and monthly exams, homework, oral exams, attendance, and various activities **thinking skills:** The student relies on linking the topics of the lectures in order to provide a model answer that can benefit him in the monthly exams. **General and transferable skills (other skills related to employability and personal development).**

	The student can study the curriculum topics in a practical way to understand and comprehend the curriculum lectures through his visit to the field, slaughterhouses, and laboratory.

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5		Calculating the percentage of egg production	(theoretical + practical)	Daily exam
2	5		Nutritional value of eggs	(theoretical + practical)	Daily exam + homework
3	5		Factors affecting the nutritional value of eggs	(theoretical + practical)	Daily exam + homework
4	5		Factors affecting the quality of veneer	(theoretical + practical)	Monthly exam
5	5		Factors affecting whiteness quality	(theoretical + practical)	Daily exam
6	5		Bloody and fleshy spots	(theoretical + practical)	Daily exam + homework
7	5		Chemistry of eggs and egg products	(theoretical + practical)	Daily exam + homework
8	5		Egg microbiology	(theoretical + practical)	Monthly exam
9	5		Chemical and nutritional properties of poultry meat	(theoretical + practical)	Daily exam
10	5		Quality of poultry meat and methods of preserving it	(theoretical + practical)	Daily exam + homework
11	5		Rancidity	(theoretical + practical)	Daily exam + homework
12	5		Throwing stiffness	(theoretical + practical)	Monthly exam
13	5		Clearance ratio and recovery ratio	(theoretical + practical)	Daily exam
14	5		Cutting poultry carcasses	(theoretical + practical)	Daily exam + homework
15	5		Storing poultry meat	(theoretical + practical)	Daily exam + homework
16	5		Lost fluids	(theoretical + practical)	Monthly exam

11- Course Evaluation

Monthly exam 60%, daily exam 20%, homework 10%, attendance 10%.

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Poultry products technology book
Main references (sources)	HANDBOOK OF POULTRY SCIENCE AND TECHNOLOGY

Recommended books and references (scientific journals, reports…)	**Hen Eggs, Improving the safety and quality of eggs and egg products, Lawrie's Meat Science, Meat, Poultry and Technology,**
Electronic References, Websites	https://www.mdpi.com/2304-8158/12/13/2531

Description Form

1- Course Name:
Baath Crimes
2- Course Code:
APP2222
3- Semester / Year:
SEMESTER 2023_2024
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Presence
6- Number of Credit Hours (Total) / Number of Units (Total)
30 hours 2 units per week
7- Course administrator's name (mention all, if more than one name)
Name: mohammed kareem shaker Email: ag.mohammed.kareem@uoanbar.edu.iq
8- Course Objectives

1-Preparing educated students with correct ideas 2- Instilling noble values and morals	**3- Helping in writing scientific research objectively** **4- Know the facts and not falsify them** **5- Knowing the repressive methods used by the former regime**

9- Teaching and Learning Strategies

Strategy	1- Enabling students to obtain the intellectual framework 2- Preparing students with a correct culture 3- Instilling and preserving the principles of patriotism 4- Developing the intellectual side of students 5- Vocabulary formulation and its absence 6- Expanding cognitive awareness

10- Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	2	Understanding an	Violation of rights a	My presence	the exam
2	2	learning	freedoms	My presence	the exam
3	2	skills developmen	A descriptive overvie	My presence	the exam
4	2	Know the facts	of political systems	My presence	the exam
5	2	Knowledge of sou	The Baathist regime's	My presence	the exam
6	2	principles	violation of rights and	My presence	the exam
7	2	Knowledge and	freedoms	My presence	the exam
8	2	awareness	The impact of the	My presence	the exam
9	2	Learn high values	behavior of the forme	My presence	the exam
10	2	raising awareness	Baathist regime on	My presence	the exam
11	2	Knowledge and	the society	My presence	the exam
12	2	perception	The impact of the	My presence	the exam
13	2	Crystallization of	transitional period	My presence	the exam
14	2	ideas	The psychological fiel	My presence	the exam
15	2	Mind developmen	+ the social field	My presence	
		Learn the facts	Religion and state		
		Brief and learn	First month exam		
		Discrimination	Culture, media, and th		
		Understanding an	militarization of socie		
		perception			
		The right style	The impact of		
			oppression and wars		
			the environment and		
			population		
			The use of		
			internationally		
			prohibited weapons a		
			environmental polluti		
			Scorched earth policy		
			drying of the marshes		
			Destruction of the		
			agricultural and anim		
			environment		
			Mass graves		
			Second month exam		

11- Course Evaluation
1- Through daily and monthly exams, homework, oral exams, attendance, and 2- class activities.

12- Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Curriculum Crimes of the former Baath regime
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1. Course Name: general animal	
2. Course Code: APP2113	
3. Semester / Year: 2024–2023	
4. Description Preparation Date: 2024/1/25	
5. Available Attendance Forms: presence	
6. Number of Credit Hours (Total) / Number of Units (Total) 75H/ 3.5	
7. Course administrator's name (mention all, if more than one name)	
Name: Waleed Ismail Kurdi ،Safaa Salah Hussein Email: ag.waleed.ismail@uoanbar.edu.iq safaa.salah@uoanbar.edu.iq	
8. Course Objectives	
Course Objectives	Knowing and understanding the most important biological standards and concepts and using them to describe and classify animals and knowing the details of the animal kingdom and the location of farm animals within it. Developing thinking and analytical skills to diagnose common communicable diseases Activating scientific skills in diagnosis and classification and their importance in animal science, breeding and management Stimulating self-development skills in scientific research and sequential investigation to activate linking information and employing it in animal productio
9. Teaching and Learning Strategies	
Strategy	1- Presentation and use of modern methods to attract the student's focus a thinking 2- Using discussion methods and motivating students to participate 3- Giving applied examples 4- Giving separate breaks to activate students 5- Conducting repeated daily tests to push students to review the material 6- Imposing duties on students and writing scientific reports 7- Using pictures, videos, and illustrative diagrams to raise studer understanding and thinking
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**5**	Laboratory Rules General	Basics of zoology	presence	Daily testing
2	**5**	Applications to microscopy	Microscope	presence	Daily testing
3	**5**	Classification of animals	The cell (part one)	presence	Daily testing
4	**5**	Cnidaria Phylum	Components of an animal cell	presence	laboratory
5	**5**	Exam 1	Exam 1	presence	Daily testing
6	**5**	Phylum Platyhelminthes	Chromosomes	presence	Laboratory
7	**5**	Phylum Nematoda	Animal tissues	presence	Daily testing
8	**5**	Phylum Annelida	Connective tissue	presence	Daily testing
9	**5**	Phylum Arthropoda	Cellular division	presence	Daily testing
10	**5**	Exam 2	Exam 2	presence	Daily testing
11	**5**	CRUSTACEA	Meiosis	presence	Daily testing
12	**5**	Phylum protozoa	Biodiversity of animals	presence	Daily testing
13	**5**	Anatomy	Animal kingdom	presence	Daily testing
14	**5**	Anatomy	Hardware components	presence	laboratory
15	**5**	Exam 3	Exam 3	presence	Daily testing

11. Course Evaluation

Student questionnaires, through daily and monthly exams, homework, oral exams, attendance, and various activities.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	General animal basics, zoology for the fi grades, parts one and two
Main references (sources)	zoology, general biology
Recommended books and references (scientific journals, reports…)	Scientific journals related to animal sciences Scientific articles and research
Electronic References, Websites	روابط تساهم في تطوير التعليم والتعلم.pdf (uoanbar.edu.iq)

Course Description Form

1. Course Name:
Mathematics
2. Course Code:
APP2116
3. Semester / Year:
First Semester/2023−2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30/2
7. Course administrator's name (mention all, if more than one name)
Name: Dr.Bilal Yaseen Taher Email: ag.bilal.yaseen@Uoanbar.edu.iq
8. Course Objectives

Course Objectives	A-Ability to understand the principle of mathematical functions B-Increasing the skills of students using it to solve the problems C-Ability the undergraduate students to use these skills in different fields. D-Ability the students to graph t equations, inequalities and all function
9. Teaching and Learning Strategies	
Strategy	A1. Analysis the problems and understand how can you be ability to solve it. A2. Testing these equations in the practical experimental. A3. Using equations to find variables in the problems. A4. Ability to convert the scales on the real number line. A5. Ability of student to evaluate the problems, and writing the scientific reports. A6. The student can acquire the practical and scientific experience his specialized field.it.

10. Course Structure

Week	Hours	Required Learning	Unit or subject name	Learning method	Evaluation method

		Outcomes			
First	2	Analysis the problems and understand how can you be able to solve it.	The rate of change function	Theoretical Lectures,white board	questions , discussions, and examples
Second	2	Ability to use suitable coordinates in the problems.	Cartesian coordinates	on the white bo	questions , discussions, and examples
Third	2	Ability to use suitable coordinates in the problems.	Increments in coordinates	on the white board, Homewo	questions , discussions, and examples
Fourth	2	Using slope to find the variables in the problems.	Slope and angles of inclination	on the white bo	questions , discussions, and examples
Fifth	2	Exam of first month			
Sixth	2	special cases of slope of lines	Properties of parallel and perpendicular lines	on the white bo	questions , discussions, and examples
Seventh	2	Boundary conditions for	Domain and Range of functions	on the white bo	questions , discussions, and examples
Eighth	2	solving equation of Absolute values and inequalities	Absolute values for equations and inequalities	on the white bo	questions , discussions, and examples
Ninth	2	solving equations of Exponential and logarithm	Exponential and logarithm functions	on the white bo	questions , discussions, and examples
Tenth	2	Exam of second month			
Eleventh	2	solving equations of Trigonometric	Trigonometric functions	on the white bo	questions , discussions, and examples
Twelfth	2	solving equations of Inverse Trigonometric.	Inverse Trigonometric functions	on the white bo	questions , discussions, and examples
Thirteenth	2	Prove identities of Trigonometric functions	Identities of Trigonometric functions	on the wl board, Homewo	questions , discussions, and examples
Fourteenth	2	Testing these equations in the practical experimental.	Solve all homework and problems	on the wl board, Homewo and Applicati by computers	questions , discussions, and examples
		Exam of the third month			
11. Course Evaluation					

Theory exam 30%, Practical Quiz 10%, Practical exam 10%, final exam 50%. Final degree from 100%.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Calculus, Thomas, 11Ed, 2006, Addison-Wesley, United States.
Recommended books and references (scientific journals, reports…)	Understanding Basic Calcul S.K.Chung, Wolfram,2007, Hc Kong.
Electronic References, Websites	https://en.wikipedia.org/wiki/Function_ (mathematics(

Course Description Form

1- Course Name:
Animal health products
2- Course Code:
APP2202
3- Semester / Year:
2023− 2024 / Autumn
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Attendance
6- Number of Credit Hours (Total) / Number of Units (Total)
75
7- Course administrator's name (mention all, if more than one name)
Name: Adel Abdullah Yousif Email: ag.dr.alhamdani@uoanbar.edu.iq

8- Course Objectives	
Course Objectives	• Teaching the subject of Animal Product Health aims to provide students with the knowledge and skills necessary to maintain the health of production animals and ensure the quality and safety of animal products offered to consumers.

9- Teaching and Learning Strategies	
Strategy	Attendance and electronic education

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
One	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet	Food Safety	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework

		e. Communication and Connection skills			
two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Pre-slaughter Animal Inspection	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Heart Examination	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Meat Inspection	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Specifications for Meat and Animal Fats	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
six	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Sources of Contamination	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
seven	5	a. Cognitive skills b. Intellectual skills c. personal skills	First Exam	Attendance / electronic	a. Daily and monthly exams b. Reports

		d. Skills in dealing with the information network and the Internet e. Communication and Connection skills			c. homework
eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Factors Affecting Bacteria in Meat	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Food and Animal Product Preservation	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Preservation Using Preservatives	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
elever	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Sources of Microbial Food Contamination	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Twelv	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection	Antioxidant Agents	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

		skills			
thirtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Meat Safety	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Pre-slaughter Examination	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fifteer	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Second Exam	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. Meat Science and Technology. Author: Majid Bashir Al-Aswad, 1980. 2. Food Analysis. Authors: Basil Kamel Dallali and Sadiq Hassan Al-Hakim, 1987.
Main references (sources)	Food Health. Author: Amer Abdulrahman Al-Sheikh Zaher, 2017.
Recommended books and references (scientific journals, reports…)	1. "Food Safety: A Practical and Case Study Approach" by Clive de W. Blackburn. 2. "Food Hygiene and Applied Food Microbiology" by R. K. Malik. 3. "Food Safety: Theory and Practice" by Paul L. Knechtges. 4. "Food Safety and Quality Systems in Developing Countries: Volume One: Export Challenges and Implementation Strategies" by

	Andre Gordon. 5. "Animal Health and Product Compendium" by CABI Publishing.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=358

Course Description Form

1. Course Name: Molecular Biology

2. Course Code: APP3409

3. Semester / Year: Spring Semester / 2023–2024

4. Description Preparation Date: 2024/1/25

5. Available Attendance Forms: weekly

6. Number of Credit Hours (Total) / Number of Units (Total):35/2

7. Course administrator's name (mention all, if more than one name)

Name: Dr. omer khaleed attallah
Email: ag.omar.k.attalah@uoanbar.edu.iq
Name: Dr. Osama A. Saeed
Email: osama_anwr85@uoanbar.edu.iq
Name: Dr. Bakr Tareq Jaber
Email: ag.bakartareq@uoanbar.edu.iq

8. Course Objectives

Course Objectives	**A. Learn the basic principles of molecu biology.** **B. Acquiring higher level thinking skills in field of molecular science.** **C. Gene expressions in eukaryotic organis and factors affecting transcription.** **D. Knowing how proteins are synthesized eukaryotic organisms.**

9. Teaching and Learning Strategies

Strategy	1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation

		Outcomes	name	method	method
Week1	2	Know the types of eukaryotic and primitive organisms	Basics of Molecular Biology	Lecture	Oral exam
Week2	2	The student learns the differences between the types of transport across cell membranes	Transport Across Cell Membrane	Lecture	Report
Week3	2	The student understands the necessary procedures when using the laboratory	Instructions of Molecular Biology Laboratory	Lecture	Short exam
Week4	2	Define biotechnology and its importance	Applications of Biotechnology for Animal Production	Lecture	Report
Week5	2	First Exam			
Week6	2	Knowledge of the mechanisms of purification and measurement of DNA concentration	Nucleic Acids Quantification	Lecture	Oral exam
Week7	2	Requirements for the polymerase chain reaction	Polymerase Chain Reaction	Lecture	Short exam
Week8	2	Learn how is genetic control in body	Gene Expression Control Methods	Lecture	Report
Week9	2	Review		Lecture	Report
Week10	2	Knowing the steps of designing a primer	Primer Design	Lecture	Oral exam
Week11	2	Second Exam			
Week12	2	Knowledge of the basics of protein synthesis and secretion	Protein synthesis and transcription	Lecture	Oral exam
Week13	2	Determination possible methods of developing genetic engineering	Recombinant DNA and genetic engineering	Lecture	Oral exam
Week14	2	Seminar	Lecture	Report	

11. Course Evaluation

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)	قازانجي، محمد عمر؛ جبر، حميد عبود. (2017). علم الحياة الجزيئي. الطبعة الاولى. جامعة بغداد، كلية الزراعة. الدار الجامعية للطباعة والنشر والترجمة
Main references (sources)	Payne, D. A. (2016). Basics of Molecular Biology. In Molecular Pathology in Clinical Practice (pp. 1-17). Springer, Cham.
Recommended books and references (scientific journals, reports…)	مصطفى، نشأت غالب. (2018). البيولجي الجزيئي. الطبعة الاولى. دار الكتاب الجامعي
Electronic References, Websites	https://blast.ncbi.nlm.nih.gov/Blast.cgi

Course Description Form

1. Course Name: Meat Science

2. Course Code: APP3411

3. Semester / Year: 2023-2024

4. Description Preparation Date: 25/1/2024

5. Available Attendance Forms:

6. Number of Credit Hours (Total) / Number of Units (Total)

75 h / 5 Unit

7. Course administrator's name (mention all, if more than one name)

Name: Assist. Prof. Hassan Muthana AbdulHameed
Email: ag.hassan.alnori@uoanbar.edu.iq

8. Course Objectives

Knowledge each topics, points and factors affecting the red meat producti marketing and consumption

9. Teaching and Learning Strategies

- Sources of production of red meat, - Economic and nutritional importance red meat production , Reality of red meat production and consumption Investment meat production efficiency of animals, - Composition a descriptions of meat animal carcasses, - Dressing percentage and fact affecting, - Growth and development of meat animals, - Slaughter house and divisions, - Transport and marketing of animals and carcasses .

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	chemical composition of meat	Some definitions of meat		Exam
2	5	Measuring moisture in meat	importance of meat		Exam
3	5	Measuring ash in meat	Muscle structure		Exam

4	5	Measuring fat in meat	contraction and relaxation in Muscle		Exam
5	5	Measuring proteins in meat	Meat proteins		Exam
6	5	Measuring fiber in meat	Tenderness		Exam
7	5	Measuring physical characteristics in meat	Water Holding Capacity		Exam
8	5	Measuring pH of meat	Meat storage		Exam
9	5	Measuring water holding capacity of meat	Bone darkening		Exam
10	5	Measure the thickness, diameter and shrinkage of some meat products	Meat quality		Exam
11	5	Measuring some chemical characteristics of meat	Color in meat		Exam
12	5	Measurement fat oxidation (MDA).	Cooling and freezing		Exam
13	5	Microbiology assessment	Radiation		Exam
14	5	Measurement of E.coli bacteria	Packaging		Exam
15	5	Measure total number of bacteria	Contamination and Deterioration of meat		Exam

11. Course Evaluation

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)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Main references (sources)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Recommended books and references (scientific journals, reports…)	Beef Cattle Production and Marketing , Dr.A.A. Saeed , H. Hasson , M. T. Alwan.
Electronic References, Websites	

Course Description Form

1- Course Name: Reproductive physiology and artificial insemination	
2- Course Code: APP 3309	
3- Semester / Year: second \ 2023-2024	
4- Description Preparation Date:2024/1/25	
5- Available Attendance Forms: weekly	
6- Number of Credit Hours (Total) / Number of Units (Total) 35 hours 3.5 unite	
7- Course administrator's name (mention all, if more than one name)	
Name: Dr.thair Rasheed Mohammed Email: ag.thair.rasheed@uoanbar.edu.iq Name: Dr. Osama A. Saeed Email: osama_anwr85@uoanbar.edu.iq	
8- Course Objectives	
Course Objectiv	• **Teaching students the basics of reproductive physiology and artificial insemination of farm animals** • **Teaching students about the parts of the male and female reproductive system of farm animals and the functions and importance of each part.** • **Teaching students about the types of hormones that control the body's functioning in general and the hormones responsible for regulating the reproduct cycles of farm animals.** • **Teaching the factors affecting puberty and sexual maturity in farm animals**
9- Teaching and Learning Strategies	
Strategy	1. Active learning 2. Cooperative learning 3. Discussions 4. Reports

10- Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	5	**a lecture PowerPoint**	**Male Reproduct System**	**Parts and how reproductive system works The male**	Quizzes
2	5	**a lecture PowerPoint**	**Female Reproductive System**	**Parts and how female reproductive system works**	Quizzes
3	5	**a lecture PowerPoint**	**Hormones–Grov factors and Reproduction**	**How hormones transmit and w in reproduction**	Quizzes
4	5	**a lecture PowerPoint**	**Puberty and sexual maturity**	**How puberty ar sexual maturity occur**	Quizzes
5	5	**a lecture PowerPoint**	**First Exam**	**Exam**	Written tests and essa questions
6	5	**a lecture PowerPoint**	**Gamete formation and transmission**	**How to produce sexual gametes**	Quizzes
7	5	**a lecture PowerPoint**	**Estrus Cycle**	**Types of reproductive cycles in farm animals and the hormones**	Quizzes
8	5	**a lecture PowerPoint**	**Fertilization and**	**How fertilizatio occurs, where i**	Quizzes

			pregnancy	occurs, the mechanisms involved, how pregnancy occurs, and the hormones involved	
9	5	a lecture PowerPoint	Fetal membrane	Understanding structure of feta membranes, ho they work, and their benefits to the fetus	Quizzes
10	5	a lecture PowerPoint	Second Exam	Exam	Written tests and essay questions
11	5	a lecture PowerPoint	Parturition	How parturition occurs and the hormones involved	Quizzes
12	5	a lecture PowerPoint	Artificial insemination	Understand hov to perform sem collection	Quizzes
13	5	a lecture PowerPoint	Artificial insemination techniques in cows and pregnancy diagnosis	Understanding how to perform artificial insemination techniques in cows and the Pregnancy diagnosis	Quizzes
14	5	a lecture PowerPoint	Biotechnology a reproduction	technique External in vitro IVF	Quizzes

15	5	**a lecture PowerPoint**	**Reproductive failure in farm animal**	**Understanding causes of reproductive failure And the factors affecting it**	Quizzes

11- Course Evaluation

Final Exam30 % Project20% Quizzes5% Laboratory20% Term Tests25 %

12- Learning and Teaching Resources

Required textbooks (curricular books any)	**فسلجة التناسل للحيوانات المزرعية . أ.د. محمد علي اسحق وزملاؤه 2011**
Main references (sources)	**Pathway to pregnancy and parturition by senger**
Recommended books and references (scientific journals, reports…)	**Applied Animal Endocrinology. By E.S. Squires Animal Science Journal**
Electronic References, Websites	https://freevideolectures.com/course/3397/animal-physiology

Course Description Form

1- Course Name: Animal physiology
2- Course Code: APP 3312
3- Semester / Year: First \ 2023-2024
4- Description Preparation Date:2024/1/25
5- Available Attendance Forms: weekly
6- Number of Credit Hours (Total) / Number of Units (Total) 35 hours 3.5 unite
7- Course administrator's name (mention all, if more than one name)
Name: Dr.thair Rasheed Mohammed Email: ag.thair.rasheed@uoanbar.edu.iq Name: Dr. Osama A. Saeed Email: osama_anwr85@uoanbar.edu.iq
8- Course Objectives

Course Objectiv	• **Students learn to understand the basic principles of animal physiology** • **He learns how to study the body's systems, starting from the cell and end with the various body systems, depending on their complexity.** • **How to conduct blood tests, transfuse blood, preserve it, and then conduc tests** • **Identify the types of nutrients entering the digestive system and how to maintain internal stability**

9- Teaching and Learning Strategies

Strategy	1. Active learning 2. Cooperative learning 3. Discussions 4. Reports

10- Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	5	**a lecture PowerPoint**	**Introduction to physiology**	**Knowledge of the foundatic of physiology**	Quizzes
2	5	**a lecture PowerPoint**	**Animal cell**	**Knowledge of c structure and procedure**	Quizzes
3	5	**a lecture PowerPoint**	**Transport of materials in the cell**	**Know the mechanism of transport and exchange of materials Include the cell and neighborin cells**	Quizzes
4	5	**a lecture PowerPoint**	**Digestive Syste and the Physiology of Digestion and Absorption**	**Description of t basic functions each part From the digestive syste**	Quizzes
5	5	**a lecture PowerPoint**	**Physiology of Circulatory System**	**Understand the circulatory syst procedure and mechanism her job**	Quizzes
6	5	**a lecture**	**First Exam**	**Exam**	Written tests and ess

		PowerPoint			questions
7	5	**a lecture PowerPoint**	**Skeletal system**	**Knowing the pa of the skeletal system and its mechanism her job**	Quizzes
8	5	**a lecture PowerPoint**	**Animal tissues**	**Know the types tissues and the description And its installation**	Quizzes
9	5	**a lecture PowerPoint**	**Blood physiolog**	**Knowledge of blood components an function Every part**	Quizzes
10	5	**a lecture PowerPoint**	**Physiology of Nervous Systen**	**Know the parts the nervous system And types of nerve cells and mechanism currency**	Quizzes
11	5	**a lecture PowerPoint**	**Second Exam**	**Exam**	Written tests and essa questions
12	5	**a lecture PowerPoint**	**Male and femal Reproductive system**	**Know the parts the reproductiv system Feminine and masculine and categories of ea part**	Quizzes
13	5	**a lecture**	**Respiratory**	**Know the parts**	Quizzes

		PowerPoint	**system**	**the respiratory system And its functior**	
14	5	**a lecture PowerPoint**	**Urinary system**	**Know the parts the urinary system And its functior**	Quizzes
15	5	**a lecture PowerPoint**	**Endocrine syste**	**Know the types glands and hormones Its roles and effects in the body**	Quizzes

11- Course Evaluation

Final Exam30 % Project20% Quizzes5% Laboratory20% Term Tests25 %

12- Learning and Teaching Resources

Required textbooks (curricular books, i any)	**2000 سلجة الحيوان . أ.د.ضياء حسن الحسني ود.صادق محمد امين الهيتي**
Main references (sources)	**Anatomy and physiology of farm animals 7nd Edition 200**
Recommended books and references (scientific journals, reports…)	**Furr, A. K. (2000). CRC handbook of laboratory safety. CR press. PAGE, I. Laboratory Safety Standard and General Safety R Policy, 1, 2.**
Electronic References, Websites	**https://freevideolectures.com/course/3397/animal-physiol**

Course Description Form

1- Course Name:
Poultry physiology
2- Course Code:
APP3305
3- Semester / Year:
2023- 2024 / Autumn
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Attendance
6- Number of Credit Hours (Total) / Number of Units (Total)
75
7- Course administrator's name (mention all, if more than one name)
Name: Adel Abdullah Yousif Email: ag.dr.alhamdani@uoanbar.edu.iq
8- Course Objectives

Course Objectives	• The objectives of teaching the subject of Avian Physiology are related to providing knowledge and a deep understanding of the processes and functions of the body and physiological systems of poultry. This subject aims to equip students with the necessary knowledge to comprehend how the avian body functions at the cellular, tissue, organ, and system levels.

9- Teaching and Learning Strategies

Strategy	Attendance and electronic education

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
One	5	a. Cognitive skills	Definition of avian	Attendance /	a. Daily and

		b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	physiology.	electronic	monthly exams b. Reports c. homework
two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Anatomy and functions of the digestive system.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Adaptations of the digestive system in poultry.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Respiratory system of poultry:	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Anatomy and functions of the respiratory system.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
six	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the	Respiration and gas exchange in bird's body.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework

		Internet e. Communication and Connection skills			
seven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	First exam	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Adaptations of the respiratory system in poultry.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Circulatory system of poultry:	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Circulation and blood distribution in the bird's body.	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
elever	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Nervous system of poultry:	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Twelv	5	a. Cognitive skills b. Intellectual skills c. personal skills	Anatomy and functions of the nervous system.	Attendance/ / electronic	a. Daily and monthly exams b. Reports

		d. Skills in dealing with the information network and the Internet e. Communication and Connection skills			c. homework
thirtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Reproductive system of poultry:	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourtee	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Anatomy and functions of the reproductive system	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fifteer	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Second exam	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Poultry bird physiology. Written by: Dr. Diaa Al-Hassani. Baghdad University Press 2000
Main references (sources)	Essential of animal physiology 4th editic S.C. Rostagi ,2007
Recommended books and references (scientific journals, reports…)	Avian Physiology . By Paul Sturkie Cornell University Press (1965) USA.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=358

Course Description Form

1- Course Name:
Biochemistry
2- Course Code:
APP1202
3- Semester / Year:
2023– 2024 / Autumn
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Attendance
6- Number of Credit Hours (Total) / Number of Units (Total)
75
7- Course administrator's name (mention all, if more than one name)
Name: Baraa Hameed Mousa Email: ag.baraa.hameed@uoanbar.edu.iq

8- Course Objectives	
Course Objectives	• Study of the chemical components of the cell and its biological interactions, including the metabolism of various components.

9- Teaching and Learning Strategies	
Strategy	Attendance and electronic education

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
One	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet	The Foundations of Biochemistry	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework

		e. Communication and Connection skills			
Two	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Carbohydrates: definition, classification	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Three	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Carbohydrates: cyclic structure, isomerism	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Four	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Lipids: definition, Physiologic Significance,	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Five	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Lipids: fatty acids, glycerides, phospholipids, waxes, sterols	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Six	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Proteins: definition, functions, classification	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
seven	5	a. Cognitive skills b. Intellectual skills c. personal skills	The Structure of Proteins	Attendance / electronic	a. Daily and monthly exams b. Reports

		d. Skills in dealing with the information network and the Internet e. Communication and Connection skills			c. homework
Eight	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Enzymes	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Nine	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Nucleotides and Nucleic Acids	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Ten	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Vitamins	Attendance / electronic	a. Daily and monthly exams b. Reports c. homework
Eleven	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Bioenergetics: The Role of ATP, Biologic Oxidation,	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Twelve	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection	Glycolysis, Gluconeogenesis and the Pentose Phosphate Pathway	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

		skills			
thirteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	The Citric Acid Cycle	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
fourteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Fatty Acid Catabolism	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework
Fifteen	5	a. Cognitive skills b. Intellectual skills c. personal skills d. Skills in dealing with the information network and the Internet e. Communication and Connection skills	Amino Acid Oxidation and the Production of Urea	Attendance/ / electronic	a. Daily and monthly exams b. Reports c. homework

11- Course Evaluation

Theoretical exams, practical exams, reports, homework

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Agricultural Biochemistry. Hassan, A.M. and Shihab, S.K. Baghdad University.
Main references (sources)	Schaum,s outlines Biochemistry. Kuchel, W.P. 2009. 3rd *ed*. McGraw Hill. London.
Recommended books and references (scientific journals, reports…)	Principles of Biochemistry. 4th ed. Nelson, L.D. and Cox, M.M. 2004. Lehninger University of Wisconsin–Madison.
Electronic References, Websites	https://www.uoanbar.edu.iq/staff-page.php?ID=371

Course Description Form

1- Course Name:
Principles of statistics
2- Course Code:
APP2111
3- Semester / Year:
Second semester/first year2023_2024
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
Weekly
6- Number of Credit Hours (Total) / Number of Units (Total)
30 theoretical hours / 3.5 units
7- Course administrator's name (mention all, if more than one name)
Name: Imad Dawood Saleh Email: imaddsaleh@uoanbar.edu.iq
8- Course Objectives

Course Objectives	- **Introducing the principles of statistics and methods of collecting statistical samples.** - **Identify the most important statistical measures used**
9- Teaching and Learning Strategies	
Strategy	- Explanation and clarification - Lecture method - Student groups

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
the first	5	statistics science	Principles of statistics	Explanation and presentation Model and lecture	the exam
the second	5	Tabular presentation and graphical representation	Principles of statistics	Explanation and presentation Model and lecture	the exam
the third	5	Frequency distribution table	Principles of statistics	Explanation and presentation Model and lecture	the exam
the fourth	5	Percentage distribution table	Principles of statistics	Explanation and presentation Model and lecture	the exam
Fifth	5	Clustered distributions	Principles of statistics	Explanation and presentation Model and lecture	the exam
Sixth	5	Measures of concentration and mediation	Principles of statistics	Explanation and presentation Model and lecture	the exam
Seventh	5	Measures of dispersion and dissimilarity	Principles of statistics	Explanation and presentation Model and lecture	the exam
Eighth	5	Principles of probability theory	Principles of statistics	Explanation and presentation Model and lecture	the exam
Ninth	5	Probability distribution	Principles of statistics	Explanation and presentation Model and lecture	the exam
The tenth	5	Binomial distribution	Principles of statistics	Explanation and presentation Model and lecture	the exam
eleventh	5	Multinomial probability distribution	Principles of statistics	Explanation and presentation Model and lecture	the exam
Twelfth	5	Normal distribution	Principles of statistics	Explanation and presentation Model and lecture	the exam
Thirteenth	5	Hypothesis testing	Principles of statistics	Explanation and presentation Model and lecture	the exam
fourteenth	5	Chi square	Principles of statistics	Explanation and presentation Model and lecture	the exam
Fifteenth	5	Simple regression and correlation	Principles of statistics	Explanation and presentation Model and lecture	the exam

11- Course Evaluation

Monthly exams	Practical exams	Daily exams	Project or report	final exam
40%	10%	-	-	50%

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to statistics 1984 Written by Dr. Humbled Mahmoud Al-Rawi/ University of Al Mosul
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Iraqi scientific and academic journals
Electronic References, Websites	

Course Description Form

1. Course Name:
Microbiology Principles
2. Course Code:
APP1206
3. Semester / Year:
Firist course /2023-2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
Attendance is in person and electronic
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. Hasan Ali Mutar Email: ha.anbuniv@uoanbar.edu.iq
8. Course Objectives

Course Objectives	This course is designed to enable students to understand and learn the basic principles of microbiology, its relationship with animals, its pathogenic and non-pathological effects, in addition to its relationship t antibiotics.

9. Teaching and Learning Strategies	
Strategy	Lectures aimed at what microbiology is, what its types are, how it is planned in different fields, its pathogenic types, and others promotion Lectures on the devices used in the microbiology laboratory and hov they are diagnosed Cultivation media and its types, created with various microorganism Vital importance in ruling out various diseases and how to perform small examinations

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	An overview of microorganisms, classification of microorganisms, naming of microorganisms	theoretical and practical lectures	Interactive exam during lectures
Second Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Cellular structures and the importance of each structure, pigmentation	theoretical and practical lectures	Interactive exam during lectures
Third Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microorganism nutrition, water, sulfur, carbon, energy sources, growth factors	theoretical and practical lectures	Interactive exam during lectures
Fourth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Bacterial growth, growth stages, bacteria counting methods	theoretical and practical lectures	Interactive exam during lectures
Fifth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microbiology Cultivation	theoretical and practical lectures	Interactive exam during lectures
Sixth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microbiology Physiology	theoretical and practical lectures	Interactive exam during lectures
Seventh Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Bacteria inheritance	theoretical and practical lectures	Interactive exam during lectures
Eighth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microbiology control	theoretical and practical lectures	Interactive exam during lectures
Nineth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	microorganisms in water	theoretical and practical lectures	Interactive exam during lectures
Tenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microorganisms in food	theoretical and practical lectures	Interactive exam during lectures

Eleventh Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Viruses	theoretical and practical lectures	Interactive exam during lectures
Twelfth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	pathogenic microbiology	theoretical and practical lectures	Interactive exam during lectures
Thirteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Genetic Engineering	theoretical and practical lectures	Interactive exam during lectures
Fourteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	immunity	theoretical and practical lectures	Interactive exam during lectures
Fifteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	antibiotics	theoretical and practical lectures	Interactive exam during lectures

11. Course Evaluation

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)	1-Veterinary microbiology and the basics of bacteriology, authored by Dr. Jaseb Jassem Haddad
Main references (sources)	2- Veterinary Microbiology, authored by Dr. Farouk Khaled Al-Hassan 3- Veterinary Microbiology, written by Dr. Farouk Khaled Hassan, Dr. Khalifa Ahmed Khalifa, Dr. Hamed Hassan Tantawy, and Dr. Jassim Muhammad Al-Abdullah
Recommended books and references (scientific journals, reports…)	4- Principles of Microbiology, written by Dr. Wahab Amin Hassan and Dr. Ghazi Musa Al-Khatib 5- The foundations of immunology written by Dr. Khalifa Ahmed Khalifa
Electronic References, Websites	

Course Description Form

1- Course Name:
Principle of Ichthyology
2- Course Code:
APP1204
3- Semester / Year:
Autumn Semester / 2023-2024
4- Description Preparation Date:
25/1/2024
5- Available Attendance Forms:
Weekly
6- Number of Credit Hours (Total) / Number of Units (Total)
75 Hours / 3.5
7- Course administrator's name (mention all, if more than one name)
Dr. Ahmed S. Naser Email: asnaser@uoanbar.edu.iq Dr. Hazem S. Abdulhameed
8- Course Objectives
2. Definition of students to raise fish, departments, types, and different branches. 7. Definition of students with the types of fish education, the characteristics of each, and how to take advantage of them. 8. Definition and knowledge of students in the appropriate environment for fisheries growth and functional methods. 9. Definition of students in ways to proliferate different fish. 10. Definition of students how to take advantage of fisheries and increase their production in the correct scientific ways. 11. Definition of students with design and planning skills for establishing fish farms according to scientific and practical foundations for this science. 12. Skills of disease diagnosis and dealing with various education problems. Calculate the design and maintenance of fish education and production proje according to modern scientific methods.
9- Teaching and Learning Strategies
Lectures/illustrations / diagrams / educational videos / educational commitm of students in the lecture and educational institution
10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introduction to Ichthyology		Scientific lecture	Class attendance/discussion/report
2	5	Anatomy of Fish		Scientific Lecture	Class attendance/discussion / report
3	5	Digestive System		Scientific Lecture	Class attendance / discussion / report
4	5	Respiratory System		Scientific Lecture	Class attendance / discussion / report
5	5	Osmoregulation		Scientific Lecture	Class attendance / discussion / report
6	5	Fish production		Scientific Lecture	Class attendance / discussion / report
7	5	Feed and feeding of fish		Scientific Lecture	Class attendance / discussion / report
8	5	Energy and Fish growth		Scientific Lecture	Class attendance / discussion / report
9	5	Natural Feed		Scientific Lecture	Class attendance / discussion / report
10	5	Nutrition methods		Scientific Lecture	Class attendance / discussion / report
11	5	Fish reproduction Natural reproduction		Scientific Lecture	Class attendance/discussion / report
12	5	Artificial fish Reproduction		Scientific Lecture	Class attendance/dis

					cussion / report
13	5	Exams	Exams	Scientific Lecture	Class attendance / discussion / report
14	5	General Review	General Review	Scientific lecture	Class attendance / discussion / report

11- Course Evaluation

daily tests / Monthly tests / Questions and discussion in lectures
Scientific Reports / Attending lectures

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Molecular Biology Dr. Nashat Ghaleb Mustafa 2018 Research, scientific reports and scientific journals
Main references (sources)	Scientific books, scientific periodicals and research
Recommended books and references (scientific journals, reports...)	Modern books for the precise specialization
Electronic References, Websites	Reputable scientific sites

Course Description Form

1- Course Name:
agricultural production economics
2- Course Code:
APP3212
3- Semester / Year:
first semester (fall)2023−2024
4- Description Preparation Date:
2024/1/25
5- Available Attendance Forms:
regularity (attendance)
6- Number of Credit Hours (Total) / Number of Units (Total)
75 Hour / 3.5 unit
7- Course administrator's name (mention all, if more than one name)
Name: Majid Abed Hamza Email: majid.abed@uoanbar.edu.iq

8- Course Objectives

Course Objectives	**Learn about economic theory.** **Introducing the content of economic Theories.** **Clarifying the role of economic theory**

9- Teaching and Learning Strategies

Strategy	A theoretical clarification of the vocabulary of the subject, using da to understand the scientific subject Using graphs in scientific material, student participation in lecture Conduct daily and monthly tests.

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Knowledge and understanding Skill for the subject	**The principles of prim agricultural produc economics**	**The principles primary agricultural production economics**	**The principles primary agricult production econor**
2	5	Knowledge and understanding Skill for the subject	**Relations between resou and production**	**Relations betw resources production**	**Relations betw resources production**

3	5	Knowledge and understanding Skill for the subject	**Determining the optimal of production resource**	**Determining the optimal size of production resou**	**Determining optimal size production resour**
4	5	Knowledge and understanding Skill for the subject	**The production function suppliers**	**The produc function suppliers**	**The produc function for suppli**
5	5	Knowledge and understanding Skill for the subject	**Chose indicators and pr relations**	**Chose indica and prices relati**	**Chose indicators prices relations**
6	5	Knowledge and understanding Skill for the subject	**The best mix of factors production**	**The best mix factors production**	**The best mix factors of producti**
7	5	Knowledge and understanding Skill for the subject	**The first exam**	**The first exam**	**The first exam**
8	5	Knowledge and understanding Skill for the subject	**Synthesis of optimal cost reduction potentials**	**Synthesis of opti and cost reduc potentials**	**Synthesis of opti and cost reduc potentials**
9	5	Knowledge and understanding Skill for the subject	**The distribution of resou between the differ productive projects**	**The distributior resources betw the differ productive proje**	**The distribution resources betw the differ productive project**
10	5	Knowledge and understanding Skill for the subject	**Production costs**	**Production costs**	**Production costs**
11	5	Knowledge and understanding Skill for the subject	**Function costs agricultural production**	**Function costs agricultural production**	**Function costs agricultural production**
12	5	Knowledge and understanding Skill for the subject	**Cost functions agricultural producti unit**	**Cost functions agricultural productivity uni**	**Cost functions agricultural productivity unit**
13	5	Knowledge and understanding Skill for the subject	**Specific economic relat to the project size**	**Specific econo relations to project size**	**Specific econo relations to project size**
14	5	Knowledge and understanding Skill for the subject	**Exam II**	**Exam II**	**Exam II**
15	5	Knowledge and understanding Skill for the subject	**Economies of scale**	**Economies of sca**	**Economies of scale**

11- Course Evaluation

Daily exam 5, submission of reports 5, semester exam 40, final exam 50 (total score 100)

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Lectures *Agricultural Production Economics - Salem Al-Najafi * Economics of Animal Production - Salem Al-Najafi

	*Production Economics - Khaled Al-Ruwais *Agricultural Production Economic-Debrtensi
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1- Course Name: Principles of Animal production

2- Course Code: APP1103

3- Semester / Year: SPRING 2023−2024

4- Description Preparation Date: 2024/1/25

5- Available Attendance Forms: weekly

6- Number of Credit Hours (Total) / Number of Units (Total): 5HOURS/3.5 UNITS

7- Course administrator's name (mention all, if more than one name)

Name: Assist. Prof. Dr. Mohammed A. AL-Bayar
Email: ag.mohammed.ala@uoanbar.edu.iq

8- Course Objectives

Course Objectives	1- know importance of animal production economy 2- know cattle and sheep breeds 3- know important methods for animals management 4- know principles on animal feeding 5- know field methods for animal field management **6**− know principles of animal physiology

9- Teaching and Learning Strategies

Strategy	Teaching therolotical parts in class by using data show and some new methods, while practical part teach in animal field

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	5	Local and international cattl breeds	Principles of Iraqi and international cattle breeds	Power point and PDF file lecture	Quiz
Second	5	Local and internatior	Principles of Iraqi	Power point	Practical

		sheep breeds	and international sheep breeds	and PDF file lecture	examinati
Third	5	Reproduction in animals	Male and female reproduction organs	Power point and practica study	Quiz
Fourth	5	Animal nutrition	Feed contents, food analysis	Power point and PDF file lecture	Quiz
Fifth	5	Milk production	Milking machines a milk secretion	Power point and practica study	Quiz
Sixth	5	Poultry production	Principle of poultry types and poultry production	Power poin and practic study	Quiz
Seventl	5	Milk secretion	Milk secretion physiology	Power point and practic study	Quiz

11- Course Evaluation

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 farm animals productio
Main references (sources)	Principles of farm animals productio
Recommended books and references (scientific journals, reports…)	Cattle management Sheep and goat management
Electronic References, Websites	Youtube.com Springer.com

Course Description Form

1. Course Name:

Principles of Soil

2. Course Code:

APP1104

3. Semester / Year:

Semester 2023−2024

4. Description Preparation Date:

2024/1/25

5. Available Attendance Forms:

weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

60 hours / 3.5 units

7. Course administrator's name (mention all, if more than one name)

Name: Huthafia jaseem mohammd
Email: ag.huthafia.Jaseem@uoanbar.edu.iq

8. Course Objectives

1. Identify the soil, which is the upper part of the eart crust.
2. Understanding the mechanism of soil formation a development.
3.
Identify the physical, chemical, fertility and biologi characteristics of soil for each type of soil.
4. Learn about analysis methods each soil characteristic.
5. Use some laboratory equipm and field tools.

9. Teaching and Learning Strategies

Strategy	1. Traditional means of explanation and clarification. 2. Electronic means of explanation and clarification. 3. Field work. 4. Adopting student groups for field work to take measurements. 5. Use of surveying devices and equipment. 6. Show illustrative pictures of the devices and their accessories.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first	5	Soil development and formation	Soil principles	**A lecture w explanation and clarification**	**The exam**
the second	5	Principles of soil Science	Soil principles	**A lecture w explanation**	**The exam**

				and clarification	
the third	5	Physical properties soil	Soil principles	**A lecture w explanation and clarification**	**The exam**
the fourth	5	Soil water	Soil principles	**A lecture w explanation and clarification**	**The exam**
Fifth	5	Estimation of moist content	Soil principles	**A lecture w explanation and clarification**	**The exam**
VI	First month exam - theoretical and practical				
Seventh	5	Estimation of bullk and true density and porosity	Soil principles	**A lecture w explanation and clarification**	**The exam**
VIII	5	Colloids and soil chemical properties	Soil principles	**A lecture w explanation and clarification**	**The exam**
Ninth	5	analysis of soil particles	Soil principles	**A lecture w explanation and clarification**	**The exam**
The tenth	5	Salinity and alkalinity in the soil	Soil principles	**A lecture w explanation and clarification**	**The exam**
Eleventh	5	Preparation of saturated soil paste	Soil principles	**A lecture w explanation and clarification**	**The exam**
Twelveth	5	Biological and biochemical properties of soil	Soil principles	**A lecture w explanation and clarification**	**The exam**
Thirteenth	Second month exam - theoretical and practical				
fourteenth	5	Soil fertility and plant nutrition	Soil principles	**A lecture w explanation and clarification**	**The exam**
Fifteenth	5	Estimation of organic matter	Soil principles	**A lecture w explanation and clarification**	**The exam**

11. Course Evaluation

1- Rapid daily tests.

2- Theoretical tests. 3- Practical tests. 4- Research and reports.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Soil principles/Abdullah Najm Al-Ani
Main references (sources)	Soil principles/Abdullah Najm Al-Ani
Recommended books and references (scientific journals, reports…)	Soil salinity / Ahmed Haider Al-Zubaidi Soil fertility / Kazem Mashhout Soil Chemistry / Kazem Mashhout Soil survey and classification / Walid Al-Akidi Soil physics/Mahdi Ibrahim Odeh
Electronic References, Websites	Local, regional and international scient books and journals concerned with s fertility, especially within scientific a virtual libraries.

Course Description Form

1- Course Name: Principles of poultry

2- Course Code: APP2107

3- Semester / Year: SPRING 2023−2024

4- Description Preparation Date: 2024/1/25

5- Available Attendance Forms: weekly

6- Number of Credit Hours (Total) / Number of Units (Total): 5HOURS/3.5 UNITS

7- Course administrator's name (mention all, if more than one name)

Name: Assist. Prof. Dr. Mohammed A. AL-Bayar
Email: ag.mohammed.ala@uoanbar.edu.iq

8- Course Objectives

Course Objectives	know importance of poultry production economy know cattle and chicken breeds know important methods for poultry management know principles on poultry feeding know field methods for poultry field management know principles of avian physiology know principles of avian feeding know principles of avian taxonomy

9− Teaching and Learning Strategies

Strategy	Teaching theological parts in class by using data show and some ne methods, while practical part teach in poultry field w

10− Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
first	5	Economic importance of	Economic importance of	Power point and PDF file	Quiz

		poultry producti	poultry producti	lecture	
Second	5	Chicken breeds	Study the classification of poultries and classification	Power point and PDF file lecture	Quiz
Third	5	The poultry science	Principles of poultry sciences	Power point and PDF file lecture	Quiz
Fourth	5	Avian physiology	Study the important avian systems	Power point with chicken anatomy	Quiz
Fifth	5	Respiratory system & cardiac muscle	Study the major activity and components	Power point and PDF file lecture	Quiz
Sixth	5	Avian digestive and reproductio systems	Study the major activity and components	Power poin and PDF fi lecture	Quiz
Seventl	5	Poultry feeding	Study the components of feed and feed stu	Power point and PDF fi lecture	Quiz
eighth	5				examinatic
Ninth	5	Poultry housing	Study the designs areas and ventilation facto	Power point and PDF fi lecture	
Tenth	5	Environmental methods that effect on poultry production	Study temperatu humidity and lighting in house	Power point and PDF fi lecture	Quiz
Elevent	5	Broiler rearing	Learning rearing broilers from the first day to marketing	Power point and practic	Quiz
twelfth	5	Egg production and marketing	Study Layers and factors that effec on egg productic	Power point and practic	Quiz
Thirtee	5	Hatchery and hatching	Study hatching systems and hatching importance	Power point and practic	Quiz
Fifteen	5	examination			examinati

11- Course Evaluation

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 farm animals productio
Main references (sources)	Principles of poultry production
Recommended books and references (scientific journals, reports…)	Avian physiology Poultry feeding
Electronic References, Websites	Youtube.com Springer.com

Course Description Form

1- Course Name: Principles of dairy

2- Course Code: APP2211

3- Semester / Year: 2023–2024

4- Description Preparation Date:25/1/2024

5- Available Attendance Forms: weekly

6- Number of Credit Hours (Total) / Number of Units (Total) 5/3.5

7- Course administrator's name (mention all, if more than one name)

Name: firas najm ismael
Email: ag.firas.najm@uoanbar.edu.iq

8- Course Objectives

Course Objectives	• Dairy Science….. • Dairy Science….. • Dairy Science…..

9- Teaching and Learning Strategies

Strategy	Theoretical 3 hour Practical 3 hour

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
14	6	BScs.	Dairy Science	Theoretica Practi	Daily, monthly and semester exams

11- Course Evaluation
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)	Dairy Science (Dr. Helan Hammadi and others)
Main references (sources)	Dairy Science book, Internet
Recommended books and references (scientific journals, reports…)	The Internet and scienti websites of relevant universit and research centers
Electronic References, Websites	Scientific YouTube channels

Course Description Form

1. Course Name:

Flat space

2. Course Code:

APP1101

3. Semester / Year:

Semester 2024−2023

4. Description Preparation Date:

2024/1/25

5. Available Attendance Forms:

Attendance (theoretical + practical)

6. Number of Credit Hours (Total) / Number of Units (Total)

60 hours / 3.5 units

7. Course administrator's name (mention all, if more than one name)

Name: Huthafia jaseem mohammd
Email: ag.huthafia.Jaseem@uoanbar.edu.iq

8. Course Objectives

1. Understand the basic principles of mathematics **2. Learn about the scanning that collects information fr the hospital** **3. Read browser reading from private search data previously drawn browser reading**	**4. Learn about measuring meth with simple tools and how each t works** **5. Use some surveying devices a learn about their parts and function of each one**

9. Teaching and Learning Strategies

Strategy	**1. Traditional means of explanation and clarification.** **2. Electronic means of explanation and clarification.** **3. Field work.** **4. Adopting student groups for field work to take measurements.** **5. Use of surveying devices and equipment.** **6. Show illustrative pictures of surveying equipment, its accessories, a survey work accessories.** **7. Show illustrative pictures of various field operations.**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first	5	Definition of surveying, ty of surveys, requirements f good survey, the importanc surveying in agriculture	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
the second		Measurement systems, unit	Basics of plane	**A lecture w**	**The exam**

		measurement, errors mistakes	space topography	**explanation and clarification**	
the third		Tape scanning, sta selection conditions, field b arrangement	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
the fourth	5	Errors in survey work, way address them and overc them	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
Fifth	5	Drawing scale, its ty categories, and determi factors	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
VI	First month exam - theoretical and practical				
Seventh	5	Areas, regular and irreg shapes, area with coordinate	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
VIII	5	Leveling, its terminol types of adjustment, and of the leveling device	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
Ninth	5	Types of settlement, phenomena of curvature fracture and their treatment	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
The tenth	5	Methods of calculating point levels and elevatio differences, direct indirect	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
Eleventh	5	Making longitudinal secti defining them, determinin central axis, determining a of points, and drawing scale	Basics of plane space topography	**A lecture w explanation and clarification**	**The exam**
Twelveth	5	Calculating point lev measuring distances, projecting the design and ac sections	Basics of plane space and topography	**A lecture w explanation and clarification**	**The exam**
Thirteenth	Second month exam - theoretical and practical				
fourteenth	5	Topographic m representation methods	Basics of plane space topography	**A lecture w explanation and clarification**	**The exam**
Fifteenth	5	Contour lines, methods finding area and con interval, finding contour li line properties	Basics of plane space topography	**A lecture w explanation and clarification**	**The exam**

11. Course Evaluation

1- Rapid daily tests. 2- Theoretical tests. 3- Practical tests. 4- Research and reports.

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Al-Khafaf, Riyad Saleh, 2000, Foundati of Plane Surveying and Topograp College of Agriculture, University Mosul, Iraq
Main references (sources)	Al-Khafaf, Riyad Saleh, 2000, Foundati of Plane Surveying and Topograp College of Agriculture, University Mosul, Iraq
Recommended books and references (scientific journals, reports…)	Younis, Samir Muhammad, 2003-20 Agricultural Survey, Department Agricultural Engineering, Faculty Agriculture, Alexandria University, Egy
Electronic References, Websites	Local, regional and international scient books and journals concerned with fertility, especially within scientific virtual libraries.

Course Description Form

1. Course Name:
Genetics

2. Course Code:

APP2008

3. Semester / Year:

Spring Semester / 2023-2024

4. Description Preparation Date:

2024/1/25

5. Available Attendance Forms:

Weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

70 Hours / 3.5

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Bakr Tareq Jaber
Email: ag.bakartareq@uoanbar.edu.iq
Name: Dr. omer khaleed attallah
Email: ag.omar.k.attalah@uoanbar.edu.iq

8. Course Objectives

Introducing the student to the scientific principles and foundations of molecu biology, the most important scientific methods in working in this field, and how benefit from it in improving important economic characteristics through molecu indicators and continuous genetic improvement, and preparing an educated cad familiar with the scientific foundations of this science

9. Teaching and Learning Strategies

Lectures / illustrations / diagrams / educational videos / educatio commitment of students in the lecture and educational institution

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introduction to science Genetics	Cell And chromosomes	Scientific lecture	Class attendance
2	5	Acid replication and synthesis of nucleic	Mitosis	Scientific lecture	Class attendance
3	5	assortment, Mendel principles segregation	Meiosis	Scientific lecture	Class attendance
4	5	Alleles dominance relation and multiple	Genetic examples	Scientific lecture	Class attendance
5	5	Environmental effects and gene expression Gene interaction and lethality	Mendel's first law	Scientific lecture	Class attendance
6	5	Sex determination and sex linkage Maternal effects and cytoplasmic	Mendel's second law	Scientific lecture	Class attendance

7	5	Chromosome variation in number	Amendments to Mendel's law	Scientific lecture	Class attendance
8	5	Change in chromosome structure	Multiple alleles	Scientific lecture	Class attendance
9	5	Mutations Genetic control of protein	genes and Lethal factors	Scientific lecture	Class attendance
10	5	Genetic control of protein	Association with sex	Scientific lecture	Class attendance
11	5	Genetic code	Linkage and crossing	Scientific lecture	Class attendance
12	5	Gene frequencies	DNA extraction	Scientific lecture	Class attendance
13	5	Genetic Markers	gene frequency	Scientific lecture	Class attendance
14	5	Exam	Exam	Scientific lecture	Class attendance

11. Course Evaluation

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)	* Basics of Genetics, first edition 2013, Maha Ali Sedqi / Dar Al-Fikr Al-Arabi
Main references (sources)	Scientific books, scientific periodicals a research
Recommended books and references (scientific journals, reports…)	Modern books for the precise specializat
Electronic References, Websites	Reputable scientific sites

Course Description Form

1- Course Name: Medical and veterinary insects

2- Course Code: APP3310

3- Semester / Year: Semester 2023_2024

4- Description Preparation Date: 25/1/2024

5- Available Attendance Forms: weekly

6- Number of Credit Hours (Total) / Number of Units (Total): 75

7- Course administrator's name (mention all, if more than one name)

Name: Khamees Abbooud Oleiwi
Email: Khamees.oleiwi@uoanbar.edu.iq

8- Course Objectives

Course Objectives	**1- Introduction to microbiology** **2- Identify the location of microorganisms among living organisms. And studying the characteristics of microorganisms - such as cultural characteristics, phenotypic appearance. Metabolic properties** **3- Studying the structures and anatomy of microorganisms and knowing the functions of these structures. Studying microbial feeding systems, identifying culture media, growth factors, preserving microbial cultures, growth phases, and methods for estimating microbial growth.** **4- Study of microbial genetics, nucleic acid synthesis, DNA replication, RNA cloning, protein synthesis, the occurrence of genetic mutations and genetic exchange (conjugation)**

9- Teaching and Learning Strategies

Strategy	1- Adopting the method of giving lectures and linking each topic with examples from the reality of the agricultural work situation 2- Giving them some simple practical exercises that are discussed by the students and solved during the lecture With the participation of all students in the section with the professor to give the material as a kind of interaction. 3- Training students in laboratories by conducting the necessary laboratory tests for diagnosis 2-4- Summer training in supporting institutions such as the directorates of

	agriculture, silos and agricultural quarantine

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	History of medical and veterinary entomology	The importance of medicinal and veterinary entomology	Lecture+Collect models of medical and veterinary insects	1
2	5	Arthropods as vectors of insect etiologies	Mouth parts in insects of medical and veterinary interest, and the mouth parts are piercing absorbent	Lecture+Collect models of medical and veterinary insects	2
3	5	The Relationship of medical insects to pestilence	Mechanical ,biologyical ,proliferative role in evolution ,proliferative role in division ,non-proliferative role in division ,ovarian transport	Lecture+Collect models of medical and veterinary insects	3
4	5	Vectors and their relationship with the pathogen	The strategy transmitted by the pathogen –the effects of the pathogen on the vector –families and species	Lecture+practical lesson	4
5	5	Sucking lice and medical importance	Species-head lice –body lice –pubic lice-life lice-diseases that ransmit them	Lecture+practical lesson	5
6	5	Lice-borne diseases	Trench fever-epidemic retrograde fever –life cycle- symptoms casused in humans	Lecture+Practical lesson	6
7	5	Animal sucking lice	Kinds of lif cycle and control	Lecture+Practical lesson	7
8	5	Animal rodent lice	Bird lice-cattle lice –life cycle –medical and control im portance	Lecture+Practical lesson	8
9	5	Rank of cricket	The diseases it carries ,life cycle,control,bedbugs,species,importanc,habits ,and life cycle	Lecture	9
10	5	Nipples and Nipples	Medical importance ,dream of scaling chickens , dream of feathering in poultry,dream of controlling wet scabies and other types	Lecture+practical lesson	10
11	5	Flias and their types	The importance of medicine ,life cycle ,and struggle	Lecture+practical lesson	11
12	5	Mosquito	General characteristics –life cycle –and factors that influence mosquito distributionbiologic characteristics –diffusion –mosquito response	Lecture+practical lesson	12
13	5	The medical importance of	Age of the insect,lethargy,malaria ,symptoms,and their types	Lecture+practical lesson	13

		mosquitoes			
14	5	Tsetse flies	Dietary behavior and habits , medical and veterinary significance,animal and man-caused diseases ,and the cycle of disease	Lecture+Practical lesson	14
15	5	Naughty flies and biters	Houseflies ,face flies,battering flies ,garbage and waste flise,meat flies ,stable flies ,horn flies, horse flise ,importance and control flies	Lecture+Practical lesson	15

A. Course Evaluation

1 - Through the participation of students in the lecture, based on their prior preparation of the subject.
2 - Giving them an exercise as a homework and asking for it to be solved with separate papers, collected from them in the next lecture.
3- Giving the students a case study and dividing the students into groups to write a report about that study.
4- Evaluation through monthly exams.

11- Learning and Teaching Resources

Required reading: · CORE TEXTS · COURSE MATERIALS OTHER	Other
Special requirements (include forexamp workshops, periodicals, IT software, websites)	**Google chrome**
Community-based facilities (include for example, guest Lectures , internship , field studies)	
Required reading: · CORE TEXTS · COURSE MATERIALS OTHER	Other

Course Description Form

1- Course Name:	
Poultry Diseases	
2- Course Code:	
APP3408	
3- Semester / Year:	
Spring/2023-2024	
4- Description Preparation Date:	
2024/1/25	
5- Available Attendance Forms:	
Weekly	
6- Number of Credit Hours (Total) / Number of Units (Total)	
75 hours (2 theoretical + 3 practical) * 15 weeks	
7- Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr. Hasan Ali Mutar Email: ha.anbuniv@uoanbar.edu.iq	
8- Course Objectives	
Course Objectives Know the importance diseases in poultry farming Study of the most important diseases th affect poultry Know how to deal with the disease a prevent it before it occurs How to treat diseases and what are t most important treatments used for ea disease Vaccines program used in poultry	• ..... • ..... • .....
9- Teaching and Learning Strategies	
Strategy	- Knowledge and Understanding A1. Identify the most important disea that affect poultry . to prevent the occurrence of the disease . Identify veterinary treatments and methods of administering them poultry flocks . Identify the preventive vaccination program for each breeding type a the most important vaccines used . Identify the interrelationship between management, nutrition, a disease occurrence . Knowing the mechanism of raising the level of immunity and

	importance in preventing disease infections Anatomy of birds and observation of pathological changes in the inter organs . How to take samples for the purpose of laboratory culture and diagnos . Conduct an allergy test to choose the best antibiotic for treatment

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Theoretical and practica applications	Introduction to the importance of poultry diseases	Theoretical lectures Practical lessons	Theory exams Practical tests
2	5	Theoretica and practic applicatior	Nutrition and disease, vitamins	Theoretical lectures Practical lessons	Theory exams Practical tests
3	5	Theoretica l and practical applications	The immune system and its role in disease resistance	Theoretical lectures Practical lessons	Theory exams Practical tests
4	5		Exam		
5	5	Theoretical and practical applications	Bacterial diseases 1	Theoretical lectures Practical lessons	Theory exams Practical tests
6	5	Theoretical and practical applications	Bacterial diseases 2	Theoretical lectures Practical lessons	Theory exams Practical tests
7	5	Theoretical and practical applications	Bacterial diseases 3	Theoretical lectures Practical	Theory exams Practical

				lessons	tests
8	5		Exam		
9	5	Theoretical and practical applications	Viral diseases 1	Theoretical lectures Practical	Theory exams Practical tests
10	5	Theoretical and practical applications	Viral diseases 2	Theoretical lectures Practical	Theory exams Practical tests
11	5	Theoretical and practical applications	Viral diseases 3	Theoretical lectures Practical	Theory exams Practical tests
12	5		Exam		
13	5	Theoretical and practical applications	Fungi and mycotoxins	Theoretical lectures Practical	Theory exams Practical tests
14	5	Theoretical and practical applications	Parasitic diseases	Theoretical lectures Practical	Theory exams Practical tests
15	5		Exam		

11- Course Evaluation

Assessment methods
1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Duties

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	اض الدواجن فؤاد إبراهيم الشيخلي الطبعة الثانية 2003 عن امراض الدواجن واعراضها وطرق الوقاية وعلاجها م.علي احمد علي قاسم اض الدواجن وعلاجها د سامي علام دكتوراة في امراض الدواجن الطبعة التاسعه امراض الدواجن والوقاية منها اعداد الدكتور يوسف شاهين
Main references (sources)	
Recommended books and references (scientific journals, reports…)	iraqi poultry sciences journal
Electronic References, Websites	

Course Description Form

1. Course Name:

Computer 1
2. Course Code:
APP1220
3. Semester / Year:
First Semester/2023−2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30/1 (practical only)
7. Course administrator's name (mention all, if more than one name)
Name: Dr.Bilal Yaseen Taher Email: ag.bilal.yaseen@Uoanbar.edu.iq
8. Course Objectives

Course Objectives	A-Ability to understand the principle of Excel program. B-Increasing the skills of students for using it to solve the problems. C-Ability the undergraduate students to use these skills in different fields. D-Ability the students to graph t equations, inequalities and all function

9. Teaching and Learning Strategies	
Strategy	A1 Analysis the data and understand how can you be ability to apply it by using the equations of excel program. A2. Testing these equations in the practical experimental. A3. Using equations to find great data for different variables with simple way and which spend less time and effort. A4. Ability to use suitable coordinates and scales in the problems, and graph it. A5. Ability of student to evaluate the problems, and writing the scientific reports. A6. The student can acquire the practical and scientific experience his specialized field it.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2	definition	introduction of	by computer	questions ,

		and important of Microsoft excel 2010	Microsoft excel 2010		discussions, and examples
Second	2	methods of operating Microsoft excel 2010 .	operating Microsoft excel 2010	by computer	questions , discussions, and examples
Third	2	Definition the groups in file tab. (save, save as,….)	file tab	by computer	questions , discussions, and examples
Fourth	2	Definition the groups in home tab (clipboard, font, number,…..)	home tab	by computer	questions , discussions, and examples
Fifth	2	Exam of first month			
Sixth	2	Include the groups (themes, page setup, select to fit,..)	page layout tab	by computer	questions , discussions, and examples
Seventh	2	Definition the groups in insert tab (tables, charts, spark lines,…)	insert tab	by computer	questions , discussions, and examples
Eighth	2	Definition the groups in insert tab (filter, links, text, symbols, ,…)	insert tab	by computer	questions , discussions, and examples
Ninth	2	Include the groups (function library, defined names, calculations,…)	formula tab	by computer	questions , discussions, and examples
Tenth	2	Exam of second month			
Eleventh	2	application of equations in formula bar	formula tab	by computer	application of equations in formula bar
Twelfth	2	Definition the groups in review tab (proofing, language, comments,….)	Review tab	by computer	Definition the groups in review tab (proofing, language, comments,….)
Thirteenth	2	Definition the groups in view tab (workbook views, show, zoom, window)	View tab	by computer	Definition the groups in view tab (workbook views, show, zoom, window)

Fourteenth	2	applications for all tabs	review for all tabs	applications for all tabs	applications for all tabs
		Exam of the third month			

11. Course Evaluation	
Practical Quiz 10%, Practical exam 40%, final exam (Practical only) 50%. Final degree from 100%.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	"Essentials of computers and library applications", Pro.Dr. Zaid Mohamed Abood, Pro.Dr. Gasan Hameed, vol.3, 2010
Main references (sources)	Practical applications by excel prograr
Recommended books and references (scientific journals, reports…)	Essentials of computers and libra applications
Electronic References, Websites	Microsoft Internet websites

Course Description Form

1. Course Name: Principles of field crops

2. Course Code: **APP2110**

3. Semester / Year: Autumn 2023_2024

4. Description Preparation Date:2024/1/25

5. Available Attendance Forms: presence only

6. Number of Credit Hours (Total) / Number of Units (Total): 45 hours per semester/3 hours per week

7. Course administrator's name (mention all, if more than one name)

Name: Ahmed Shehab Abdullah Ramadan
Email: ag.ahmed.shehab@uoanbar.edu.iq

8. Course Objectives

Course Objectives	Teaching students the basics of field crop science from both theoretical and applied aspects, providing them with the required knowledge in growing field crops and how to deal with, manage, produce and improve them, and mastering the various crop service operations from planting to maturity and post-harvest operations, in addition to studying how to preserve and maintain the soil, sustaining its productivity, and mastering modern irrigation methods.

9. Teaching and Learning Strategies

Strategy	-Education strategy, collaborative concept planning. -Education strategy brainstorming. -Education strategy notes series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introduction to crop science and recent statistics on food production in			Weekly, monthly and daily exams and

		the world		Theoretical	exam End of year.
2	3	Morphological characteristics of field crop families			
3	3	Methods of classifying field crops			
4	3	Factors affecting crop production (heat, light, and CO2)			
5	3	Humidity, rain and water rating			
6	3	Semester exam			
7	3	Plowing and preparing the land for agriculture			
8	3	Crop service factors			
9	3	Seed and grain grading science			
10	3	Types of weeds and methods of its combating			
11	3	Agricultural cycles, their types and benefits			
12	3	Principles of crop breeding and improvement			
13	3	Stages of production and multiplication of seeds improved			
14	3	A brief idea about the most important crops grown in Iraq in the form of tables			
15	3	Semester exam			

11. Course Evaluation

The distribution is as follows: 15 marks for the monthly and daily exams and participation for the theoretical aspect for the first month, 15 marks for the monthly and daily exams and participation for the theoretical aspect for the second month, and 30 marks for the theoretical final for the final exams.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1-Principles of field crops: Dr. Majeed Mohsen Al-Ansari and others, 1891, Higher Education Press, Iraq. 2-Field crop production: Dr. Majeed Mohsen Al-Ansari 1891, Dar Al-Kutub Press - University, Mosul. 3-Production and improvement of field crops: Dr.

	Abdul Hamid Ahmed Al-Younis, 1883, Dar Al-Kutub Directorate for Printing and Publishing - Baghdad. 4-Understanding crop production Dr. Hatem Jabbar Attia and Dr. Karima Muhammad Wahib 1898, Higher Education and Scientific Research Press.
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Scientific research
Electronic References, Websites	Google

Course Description Form

1- Course Name:

Forage and pasture crops

2- Course Code:

APP2209

3- Semester / Year:

Semester 2/ Year: 2023-2024

4- Description Preparation Date:

2024/1/25

5- Available Attendance Forms:

Weekly

6- Number of Credit Hours (Total): / Number of Units (Total):

Number of Credit Hours (Total): 75 / Number of Units (Total): 3

7- Course administrator's name (mention all, if more than one name)

Name: Dr. Abdulsamad Hashim Noaman
Email: ag.abdullsamad.hashim@uoanbar.edu.iq
Name: Dr. Imad Mahmood Ali
Email: ag.imad.mahmood@uoanbar.edu.iq
Name: Dr. Abdullah Mahmood Saleh
Email: ag.abdullah.mahmood@uoanbar.edu.iq

8- Course Objectives

Course Objectives	• Introducing the importance of forage crops • Studying the ways to improve fodder production, storage a utilization • Studying the necessary ways to improve forage production, stor and utilization

9- Teaching and Learning Strategies

Strategy	1. The method of giving lectures. 2. Explanation, interpretation, and linking method. 3. Explanation method using electronic illustrations. 4. field observations

10- Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Education method	Evaluation method
1	5	Introduction to forage crops	A historical overview of the beginning and development of forage crops and their importance in human and animal life, taxonomy of forage crops and places of origin	Lectures	Exams
2	5	Legume forage crops	Leguminous forage crops and their importance	Lectures	Exams

3	5	Legume forage crops	Alfalfa, its types, importance, appropriate environment, methods of cultivation, field practice.	Lectures	Exams
4	5	Legume forage crops	Clover, its types, importance, favorable environment, methods of cultivation, field practice.	Lectures	Exams
5	5	Forage crops	Annual Medic, its types, importance, appropriate environment, methods of cultivation, field practice.	Lectures	Exams
6	5	Forage crops	Sweet clover, its types, importance, appropriate environment, methods of cultivation, field practice	Lectures	Exams
7	5	Grass summer forage crops	Sorghum, and Sudan grass its types, importance, appropriate environment, methods of cultivation, field practice.	Lectures	Exams
8	5	Grass summer forage crops	Corn and millet its types, importance, appropriate environment, methods of cultivation, field practice.	Lectures	Exams
9	5	Grass winter forage crops	barley, oats and rye grass, types and varieties, field practice	Lectures	Exams
10	5	Forage crops	Intercropping and agricultural cycles	Lectures	Exams
11	5	Forage crops	Harvesting and storage	Lectures	Exams
12	5	Manufacture of hay and silage	Manufacture of hay and silage by traditional and modern methods, aerobic and anaerobic reactions, compounds resulting from fermentation.	Lectures	Exams
13	5	Toxic substances and compounds in forage crops	Toxic substances and compounds in forage crops and ways to prevent them	Lectures	Exams
14	5	Estimation of forage quality trail	Dry matter, digestibility and protein,	Lectures	Exams
15	5	Estimation of forage quality trail	Estimation of carbohydrates, fiber and ash	Lectures	Exams

11- Course Evaluation

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.

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Forage Crops / Written by Dr. Muhammad Al-Sayyid Radwan and Dr. Abdullah Qasim Al-Fakhri / University of Mosul / 1975 Forage crops and pastures / written by Ramadan Al-Takriti and Dr. Hikmat As Rumi and Dr. Tawakkol Younis University of Baghdad / 1981

Main references (sources)	Tropical Forage Legumes.Edit By P.J.Skern Rome.1977
Recommended books and references (scientific journals, reports…)	Forage Seed Production. Temperate Spec Edited By D.T.Fairey andJ.G.Hampton C international.1997.U.K PP420
Electronic References, Websites	https://en.wikipedia.org/wiki/Forage

Course Description Form

1. Course Name: Pastures management
2. Course Code: APP3406
3. Semester / Year: second 2023−2024
4. Description Preparation Date: 2024/1/25
5. Available Attendance Forms: weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
30 Theoretical Hours + 45 Practical Hours 3 units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. yas amen mohammed Email: ag.yass.ameen@uoanbar.edu.iq
8. Course Objectives
A - Studying the scientific aspects related to the exploitation and development of natural pastures in general and in Iraq in particular and how to develop it. B- Expanding the student's theoretical and practical understandings.
9. Teaching and Learning Strategies

Strategy	-Increasing students' awareness of modern trends in managing and protecting pastures. -Using Power Point presentation methods to convey information well and clearly to the student And Urging students to take advantage of Google search engines while asking them to submit scientific reports on the topics given to them in the academic subject. - Semester and final exams are considered a reflection of the student's commitment and cognitive and skill achievement.

10. Course Structure

Week	Hours	Subject Name	Required learning outcomes	Teaching Methods	Evaluation Methods
1	5	Pastures management	The importance of natural pastures		
2	5	Pastures management	Types of natural pastures		
3	5	Pastures management	Factors affecting pastures		
4	5	Pastures management	Pastures, soil and water conservation		
5	5	Pastures management	Effects of plant vegetation - desertification		
6	5	Pastures management	Grazing arrangement		
7	5	Pastures management	The effect of grazing on plant reproduction and plant composition		
8	5	Pastures management	Grazing systems		
9	5	Pastures management	Proper exploitation of natural pastures		
10	5	Pastures management	The condition of the pasture and its ruling		
11	5	Pastures management	Classification of pasture conditions		
12	5	Pastures management	Grazing in the Mesopotamian plain		
13	5	Pastures management	Grazing in the Iraqi desert		
14	5	Pastures management	Harmful and poisonous plants in pasture lands		
15	5	Pastures management	Poisoning and bloating in pasture animals		

11. Course Evaluation

Daily and monthly tests through questions on the subject of the study subject.
• Grades on the student's participation in research and scientific reports.
• Student activities through the possibility of applying some rules and homework at home during the school season regarding the academic subject.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Natural Pasture Management - Written by Dr. Ramadan Al-Takriti and Mr. Abbas Mahdi Al-Hassan - 1981 - University of Mosul.
Main references (sources)	Fodder crops and pastures (Part One) - written by Dr. Muhammad Al-Sayyid Radwan and Dr. Abdullah Qasim Al-Fakhri -

	1975 - University of Mosul.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Scientific articles from the Internet and scientific journals specialized in this course

Course Description Form

1. Course Name:
Freedom , democracy and human rights
2. Course Code:
APP3112
3. Semester / Year:
SEMESTER 2023-2024
4. Description Preparation Date:
2024 /1/25
5. Available Attendance Forms:
Presence
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours 2 units per week
7. Course administrator's name (mention all, if more than one name)
Name: abd al salam khalaf Email: abd.khalaf@uoanbar.edu.iq
8. Course Objectives

1- Preparing students who believe in human rights and democracy 2- Instilling national values in the individual and society and combating forms of corrupti	3- Helping in writing scientific research objectively 4- Knowledge of the general rights and freedoms of the individual and society 1- Practical application of public rights and freedom

9. Teaching and Learning Strategies	
Strategy	1- Enabling students to obtain the intellectual framework A believer in the strategy of human rights and public freedoms 2- Preparing a generation that is conscious and aware of the importance of rights and freedoms 3- Instilling the principles of patriotism and preserving it 4- Developing a culture of human rights and democracy among the individua and society 1- Developing students' cognitive awareness of the importance of human rights And democracy

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding an	Definition of human	My presence	the exam
2	2	learning	rights	My presence	the exam
3	2	skills developmen	A historical overview of	My presence	the exam
4	2	Correct spelling	human rights	My presence	the exam
5	2	Know the errors	Human rights in heaven	My presence	the exam
6	2	Knowledge and	religions	My presence	the exam
7	2	awareness	The most important pul	My presence	the exam
8	2	Learn to parse	rights and freedoms	My presence	the exam
9	2	Learn to parse	Human rights violations	My presence	the exam
10	2	Knowledge and	society	My presence	the exam
11	2	perception	Supporting internationa	My presence	the exam
12	2	Learn Arabic	provisions and	My presence	the exam
13	2	Proper	conventions	My presence	the exam
14	2	pronunciation	For human rights	My presence	the exam
15	2	Learn the	Applications in the gene	My presence	
		differences	rights of the individual		
		Brief and learn	Administrative corrupti		
		Discrimination	and ways to combat it		
		Understanding an	Concepts of instilling		
		perception	national values in socie		
		The right style	Democracy (definition -		
			concept)		
			Democracy (historical		
			stages)		
			Difficulties in		
			implementing democra		
			in society		
			Distinguishing between		
			rights and democracy		
			Characteristics of a		
			democratic system		
			Advantages and		
			disadvantages of		
			democracy		
			Democracy applications		
			The election		
			Democratic Constitutio		

11. Course Evaluation

1- Through daily and monthly exams, homework, oral exams, attendance, and class activities.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Human rights, children and democracy
Main references (sources)	
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	

Course Description Form

1. Course Name:

Animal Breeding

2. Course Code:

APP3308

3. Semester / Year:

Spring Semester / 2023-2024

4. Description Preparation Date:

2024/1/25

5. Available Attendance Forms:

weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

70 Hours / 3.5

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Bakr Tareq Jaber
Email: ag.bakartareq@uoanbar.edu.iq
Name: Dr. omer khaleed attallah
Email: ag.omar.k.attalah@uoanbar.edu.iq

8. Course Objectives

introducing the student to the scientific principles and foundations for genetica improving and developing breeds to obtain high production performance and the m important scientific methods for improving important economic traits throu selection and continuous genetic improvement and preparing an educated staff famil with the scientific foundations of managing agricultural animal fields

9. Teaching and Learning Strategies

Lectures / illustrations / diagrams / educational videos / educatio commitment of students in the lecture and educational institution

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Animal breeding	Introduction Animal Improvement Associations	Scientific lecture	Class attendance / discussion / report
2	5	Variance and Variation	Genetic and phenotypic variance	Scientific Lecture	Class attendance / discussion / report
3	5	Quantitative and	Types of traits and their importance	Scientific Lecture	Class attendance / discussion / report

		qualitative traits			
4	5	Population Genetic	Population and their types	Scientific Lecture	Class attendance / discussion / report
5	5	Gene expression	Arithmetic problems	Scientific Lecture	Class attendance / discussion / report
6	5	Breeding value	general concepts	Scientific Lecture	Class attendance / discussion / report
7	5	Monozygotic twins	twins inbreeding / outbreeding	Scientific Lecture	Class attendance / discussion / report
8	5	Repeatability	general concepts	Scientific Lecture	Class attendance / discussion / report
9	5	Selection types	genetic selection	Scientific Lecture	Class attendance / discussion / report
10	5	Breeding type	Types of Selection	Scientific Lecture	Class attendance / discussion / report
11	5	Line breeding	Types of Selection	Scientific Lecture	Class attendance / discussion / report
12	5	Cross breeding	Types of Cross breeding	Scientific Lecture	Class attendance / discussion / report
13	5	Relationship	degree of kinship	Scientific Lecture	Class attendance / discussion / report
14	5	genetic clues	genetic clues	Scientific lecture	Class attendance / discussion / report

11. Course Evaluation

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)	Animal Breeding Dr. Salah Jalal Hassan Karam 2003
Main references (sources)	Scientific books, scientific periodicals a research
Recommended books and references (scientific journals, reports…)	Modern books for the precise specializat
Electronic References, Websites	Reputable scientific sites

Course Description Form

1- Course Name: English languages 1
2- Course Code: APP3109
3- Semester : 2023−2024
4- Description Preparation Date:2024/1/25
5- Available Attendance Forms: weekly
6- Number of Credit (15 Hours) / one Units (Total)
7- Course administrator's name (mention all, if more than one name)
Name: Imad Dawood Saleh Email: imaddsaleh@ouanbar.edu.iq
8- Course Objectives

Course Objectives	• **The goal of this course is to empower students with linguistic and life skills** • **The course's integrated skills curriculum develops the student's self−confidence in order to survive.** • **Succeed in professional and social meetings within a global English−speaking community** • **Use language to express knowledge of the environmental and health impacts of mismanagement of hazardous waste**

9- Teaching and Learning Strategies

Strategy	The course is designed for first-year university students who want to use their English language For international communication. The course is based on material taken from New Headway Plus [Beginner], and articles Recent scientific news related to students' specialization. The four skills, namely listening, speaking, writing and

	reading, are developed during the training course

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English language dictionaries,	Specialized English language	In presence	Questions during lectures, quiz and exam in class
2	2	Understand texts using effective learning strategies for reading and vocabulary building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
3	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
4	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
5	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
6	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
7	2	Understand texts using effective learning strategies for reading and vocabulary ‹building	Specialized English language	In presence	Questions during lectures, quiz and exam in class

8	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English ‹language dictionaries	Specialized English language	In presence	Questions during lectures, quiz and exam in class
9	2	Understand texts using effective learning strategies for reading and vocabulary building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
10	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
11	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
12	2	Understand texts using effective learning strategies for reading and vocabulary building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
13	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
14	2	Understand texts using effective learning strategies for reading and vocabulary ‹building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
15	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English ‹language dictionaries	Specialized English language	In presence	Questions during lectures, quiz and exam in class

11- Course Evaluation

Quizzes and talks

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	New Headway Plus [Beginner] by John and Liz Soars, Oxford: Oxford University Press (2006), (1) Modern scientific articles from the news related to the students' specialty, and (2) Internet links and videos related to the topics discussed in General English and English for Specific Purposes lectures. (3)
Main references (sources)	New Headway Plus [Beginner] by John and Liz Soars, Oxford: Oxford University Press (2006),)
Recommended books and references (scientific journals, reports…)	Morphy,A.J (1983) English Grammar in use. Cambridge:CUP
Electronic References, Websites	https://www.englishclub.com/grammar/verb-tenses.htm https://www.ego4u.com/en/cram- www.perfect-english-grammar.com/verb-tenses.htm https://en.wikipedia.org/wiki/Grammatical_tense

Course Description Form

1. Course Name:
Applications of Computer3
2. Course Code:
APP1220
3. Semester / Year:
First Semester/2023−2024
4. Description Preparation Date:
2024/1/25
5. Available Attendance Forms:
in-person learning
6. Number of Credit Hours (Total) / Number of Units (Total)
30/1 (practical only)
7. Course administrator's name (mention all, if more than one name)
Name: Dr.Bilal Yaseen Taher Email: ag.bilal.yaseen@Uoanbar.edu.iq
8. Course Objectives

Course Objectives	A-Ability to understand the principle of Excel program. B-Increasing the skills of students for using it to solve the problems. C-Ability the undergraduate students to use these skills in different fields. D-Ability the students to graph t equations, inequalities and all function

9. Teaching and Learning Strategies

Strategy	A1 Analysis the data and understand how can you be ability to apply it by using the equations of excel program. A2. Testing these equations in the practical experimental. A3. Using equations to find great data for different variables with simple way and which spend less time and effort. A4. Ability to use suitable coordinates and scales in the problems, and graph it. A5. Ability of student to evaluate the problems, and writing the scientific reports. A6. The student can acquire the practical and scientific experience his specialized field it.

10. Course Structure

Week	Hours	Required	Unit or subject	Learning	Evaluation

		Learning Outcomes	name	method	method
First	2	definition and important of Microsoft excel 2010	introduction of Microsoft excel 2010	by computer	questions , discussions, and examples
Second	2	methods of operating Microsoft excel 2010 .	operating Microsoft excel 2010	by computer	questions , discussions, and examples
Third	2	Definition the groups in file tab. (save, save as,….)	file tab	by computer	questions , discussions, and examples
Fourth	2	Definition the groups in home tab (clipboard, font, number,…..)	home tab	by computer	questions , discussions, and examples
Fifth	2	Exam of first month			
Sixth	2	Include the groups (themes, page setup, select to fit,..)	page layout tab	by computer	questions , discussions, and examples
Seventh	2	Definition the groups in insert tab (tables, charts, spark lines,…)	insert tab	by computer	questions , discussions, and examples
Eighth	2	Definition the groups in insert tab (filter, links, text, symbols, ,…)	insert tab	by computer	questions , discussions, and examples
Ninth	2	Include the groups (function library, defined names, calculations,…)	formula tab	by computer	questions , discussions, and examples
Tenth	2	Exam of second month			
Eleventh	2	application of equations in formula bar	formula tab	by computer	application of equations in formula bar
Twelfth	2	Definition the groups in review tab (proofing, language, comments,….)	Review tab	by computer	Definition the groups in review tab (proofing, language, comments,….)
Thirteenth	2	Definition the groups in view tab	View tab	by computer	Definition the groups in view

		(workbook views, show, zoom, window)			tab (workbook views, show, zoom, window)
Fourteenth	2	applications for all tabs	review for all tabs	applications for all tabs	applications for all tabs
		Exam of the third month			

11. Course Evaluation

Practical Quiz 10%, Practical exam 40%, final exam (Practical only) 50%.
Final degree from 100%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	"Essentials of computers and library applications", Pro.Dr. Zaid Mohamed Abood, Pro.Dr. Gasan Hameed, vol.3, 2010
Main references (sources)	Practical applications by excel prograr
Recommended books and references (scientific journals, reports…)	Essentials of computers and libra applications
Electronic References, Websites	Microsoft Internet websites

Course Description Form

1. Course Name:

Applications of Computer4

2. Course Code:

APP1221

3. Semester / Year:

Second Semester/2023−2024

4. Description Preparation Date:

2024/1/25

5. Available Attendance Forms:

in-person learning

6. Number of Credit Hours (Total) / Number of Units (Total)

30/1 (practical only)

7. Course administrator's name (mention all, if more than one name)

Name: Dr.Bilal Yaseen Taher
Email: ag.bilal.yaseen@Uoanbar.edu.iq

8. Course Objectives

Course Objectives	Ability to understand the principle of PowerPoint program, Increasing the skills of students for using it to solve the problems, Ability the undergraduate students to use these skills in different fields, Ability the students to show their presentations of researches by data sh

9. Teaching and Learning Strategies

Strategy	Using these computer essentials and skills in different applications. Using the computer programs to do the presentations for your seminars and researches by data show. Ability of student to evaluate the problems, and writing then scientific reports. The student can acquire the practical and scientific experience in his specialized field it.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2	definition and important of Microsoft excel 2010	introduction of Microsoft PowerPoint 2010	by computer	questions , discussions, and examples
Second	2	operating Microsoft PowerPoint 2010.	operating Microsoft PowerPoint 2010	by computer	questions , discussions, and examples

Third	2	Definition the groups in file tab. (save, save as,….)	file, home, and Insert tab	by computer	questions , discussions, and examples
Fourth	2	Definition the groups in home tab (clipboard, font, number,…..)	Design and Transitions Tab	by computer	questions , discussions, and examples
Fifth	2	Exam of first month			
Sixth	2	Include the groups (themes, page setup, select to fit,..)	page layout tab	by computer	questions , discussions, and examples
Seventh	2	Definition the groups in Animation tab (type of animations,…)	Animation tab	by computer	questions , discussions, and examples
Eighth	2	Definition the methods of slides view in view tab	View tab	by computer	questions , discussions, and examples
Ninth	2	slides show methods calculations,…)	Slides Show tab	by computer	questions , discussions, and examples
Tenth	2	Exam of second month			
Eleventh	2	proofing and translations	Review tab	by computer	application of equations in formula bar
Twelfth	2	methods of slides printing	methods of slides Print	by computer	Definition the groups in review tab (proofing, language, comments,….)
Thirteenth	2	Definition the groups in slides show tab	methods of slides show	by computer	Definition the groups in view tab (workbook views, show, zoom, window)
Fourteenth	2	applications for all tabs	review for all tabs	applications for all tabs	applications for all tabs
		Exam of the third month			

11. Course Evaluation

Practical Quiz 10%, Practical exam 40%, final exam (Practical only) 50%.
Final degree from 100%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	"Essentials of computers and library applications", Pro.Dr. Zaid Mohamed Abood, Pro.Dr. Gasan Hameed, vol.3, 2010
Main references (sources)	Practical applications by PowerPo program.
Recommended books and references (scientific journals, reports…)	Essentials of computers and libr applications
Electronic References, Websites	Microsoft Internet websites

Course Description Form

1- Course Name: Animal production Mechanization

2- Course Code: APP1201

3- Semester / Year:2023/2024

4- Description Preparation Date:2024/1/25

5- Available Attendance Forms: Weekly attendance

6- Number of Credit Hours (Total) / Number of Units (Total) 75 h.

7- Course administrator's name (mention all, if more than one name)

Name: Dr. Sufian Mahmood Farhan
Email: ag.sofyan.mahmood@uoanbar.edu.iq

8- Course Objectives

Course Objectives	**• Introducing students to equipment and mechanization in poultry production fields and how to use them.** **• Introducing students to the difference between the equipment used i poultry halls and large animal halls.** **• Recognizing the importance of using modern machines and advance mechanizat**

9- Teaching and Learning Strategies

Strategy	. 1- The student gets to know the concept of mechanization of animal production. 2- The student will learn how to use modern equipment in poultry halls. 3- The student should determine the difference between poultry equipment a equipment for large animals.

10- Course Structure

Week	Hours	Required Learning	Unit or subject name	Learning method	Evaluation method

		Outcomes			
Week1	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Theoretical + practical Control environmental conditions	Lecture	Oral exam
Week2	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Mechanization of wat supply / theoretical Calculating water nee For the farm/work	Lecture	Report
Week3	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Mechanization of barı cleaning equipment / theoretical Used tractors and pullers In cleaning/practical	Lecture	Short exam
Week4	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Ventilation equipment and pullers theoretical Milking machines/practical	Lecture	Report
Week5	5	Types of milkshakes / theoretical			
Week6	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Mechanization of ventilation in bird halls / theoretical and practical	Lecture	Oral exam
Week7	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Feeding equipment for poultry birds	Lecture	Short exam
Week8	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and	Drinking equipment in bird fields theoretical and practical	Lecture	Oral exam

		Connection skills			
Week9	5	Review	Mechanization of cooling in bird fields / theoretical and practical	Lecture	Short exam
Week10	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Mechanization of heating equipment in fields Poultry / theoretical and practical	Lecture	Report
Week11	5	Mechanization of cleaning bird halls / theoretical and practical			
Week12	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Hatcheries and their parts Theoretical and practical	Lecture	Oral exam
Week13	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Silo and feed tanks practical and theoretical	Lecture	Oral exam
Week14	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Mechanization of wool shearing and hair cutting And equipment for cutting horns in farm animals / theoretical and practical	Lecture	Report
Week15	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication Connection skills	Agricultural tractors / theoretical And my work	Unsaturated compounds containing more than one double bond + preparation and behavior of aldehydes and ketones +First Exam	

11- Course Evaluation

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)	Hatching and management of modern poultry hatcheries - Dr. Muhammad Hamad Saleh
Main references (sources)	Mechanization of animal production - Mahmoud Hassan Rafiq
Recommended books and references (scientific journals, reports…)	a. Giving some awareness and educational lectures to students. b.visits to see the college farms of laying hens and broiler and the diets factories in the governorate
Electronic References, Websites	a. Recent studies and studies. b. The Internet of Information (Internet)

Course Description Form

1- Course Name: Plant Protection
2- Course Code: **APP2108**
3- Semester / Year: Autumn 2023−2024
4- Description Preparation Date: 2024/1/25
5- Available Attendance Forms: weekly
Theoretical material is given 100% in person. Practical material is given 100% in person.
6- Number of Credit Hours (Total) / Number of Units (Total)
75 hours
7- Course administrator's name (mention all, if more than one name)
Name: Msc Mohammed majid ABED Email: muhammed.abed@uoanbar.edu.iq
8- Course Objectives

Course Objectives 1- Understand the concept of pest 2- Distinguish between a primary lesion and a secondary lesion 3- Distinguishing between types of insect, fungal, bacterial, viral and other pests. 4- Knowing the level of damage to the pest and when the control order is required	• .... • .... • ....

9- Teaching and Learning Strategies

Strategy	1. Lectures 2.Work papers 3.Online studies 4.Scientific visits 5. Duties

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first	5	Identify the most important pests that affect crops and classify them according to the damage they cause	A general introduction to foundations of plant protection Pest and its types The pest is divided accord to the economic damage i causes Factors determining the spread of pests	Lectures	Exam
Second	5	Teaching students how to write the taxonomic position of insects, in addition to knowing the general characteristics of insects and the divisions of the insect's body	Insects and their taxonom positions General characteristics of insects Insect body sections Head thorax Abdomen	Lectures	Exam
Third	5	Knowing the parts attached to the insec head and how to use them for diagnosis	Insect head accessories Types of mouth parts Types of antennae	Lectures	Exam
Fourth	5	Identifying the types legs and wings in insects and adopting them as diagnostic characteristics	Types of legs Types of wings	Lectures	Exam
Fifth	5	Identify the abdomer insects and their appendages	Appendages of The Abdominal	Lectures	Exam
Sixth	5	Knowing the stages t insects go through to become adults	Metamorphosis in insects	Lectures	Exam
seventh	5	Knowing how insects grow and how to increase their size	Moulting in insects	Lectures	Exam
Eighth	5	Learn how insects resist environmental conditions	Hibernation in insects	Lectures	Exam
Ninth	5	Phenotypic differenc between insect stage	Comparison between different stages of insects	Lectures	Exam
The tenth	5	The methods practic by insects and the resulting damage, an their divisions	Means by which insects harm plant crops Classification of insects according to the food they	Lectures	Exam

		according to their nutrition and food preference	eat Classification of insects according to the nutrition specialization of plant families		
eleventh	5	Introducing students plant diseases and classifying them according to the type plant disease	Plant disease, diagnosis a classification of plant diseases	Lectures	Exam
twelveth	5	Introducing students the most important fungal diseases that cause economic losse to agricultural crops, their causes and way to prevent or reduce their damage.	The most important plant diseases Downy and powdery mild diseases Seedling death disease Covered and loose smut disease Khayas grew palm trees Fusarium wilt of tomato	Lectures	Exam
Thirteen	5	Introducing students the most important bacterial diseases tha cause economic losse to agricultural crops, their causes and way to prevent or reduce their damage.	Bacteria and the most important bacterial diseases Coronary tuberculosis Bacterial wilt on cucurbits Potato scab disease	Lectures	Exam
Fourteen	5	Introducing students the most important viral diseases that ca economic losses to agricultural crops, th causes, and ways to prevent or reduce th damage.	Viruses and the most important viral diseases Caecilians and the most important diseases they cause	Lectures	Exam
Fifteen	5	Introducing students the most important damages caused by parasitic flowering plants, and ways to prevent or reduce th damage, in addition t identifying bushes a the damage they cau the damage caused b rodents, and the mos important control methods used.	Diseases caused by parasi flowering plants Non-infectious plant diseases (physiological diseases) The bush is divided according to its life cycle Rodents and their damage Types of control methods used against pests	Lectures	Exam

11- Course Evaluation

1- Monthly exams.
2- Rapid exams (Quazat).
3- Evaluation through classroom activity.
4- By preparing scientific reports and taking advantage of information networks.
5- Final exams.

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	1 - Pesticides, basic concepts and their role in agricultural fields

	Al-Sahi (2006). Dr.. Khaled Al-Adel. 2 - Basics of plant protection, theoretical and practical parts. (2010). Dr.. Abdullah Nasher Murshid
Main references (sources)	1. Principles and methods of controlling agricultural pests (2013). Dr . Nizar Mustafa Al-Mallah. University of Al Mosul.
Recommended books and references (scientific journals, reports…)	Principles and methods of controlling agricultural p (2013). Dr . Nizar Mustafa Al-Mallah. University of Al Mos
Electronic References, Websites	Scientific sites in Google Chrome

Course Description Form

1. Course Name:
Principles of Agricultural guidance
2. Course Code:
APP2205
3. Semester / Year:
Second semester (Spring) 2023_2024
4. Description Preparation Date:
25/1/2024
5. Available Attendance Forms:
weekly (attendance)
6. Number of Credit Hours (Total) / Number of Units (Total)
75 Hour / 3.5unit
7. Course administrator's name (mention all, if more than one name)
Name: Mustafa Subhi Abd AL-Gabbar Email: **mustafa.subhi@ uoanbar.edu.iq**
8. Course Objectives

Course Objectives	Providing the student with basic knowledge of agricultural extension concepts Providing the student with the general concepts and principles of agricultural extension, Providing the student with the objectives of agricultural extension, Providing the student and introducing him to how to plan agricultural extension programs

9. Teaching and Learning Strategies

Strategy	A theoretical clarification of the vocabulary of the subject, using da to understand the scientific subject Using graphs in scientific material, student participation in lecture Conduct daily and monthly tests.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Knowledge and understanding Skillfor the subject	brief history	theoretically Practical vocabulary Subject	Examination, reporting
2	5	Knowledge and understanding Skill for the subject	Introduction to agricultural extension	theoretically Practical vocabulary Subject	Examination, reporting
3	5	Knowledge and understanding Skill for the subject	The importance of agricultural extension	theoretically Practical vocabulary Subject	Examination, reporting
4	5	Knowledge and understanding Skill for the subject	Principles of agricultural extension	theoretically Practical vocabulary Subject	Examination, reporting
5	5	Knowledge and understanding Skill for the subject	The importance of having principles of guidance work	theoretically Practical vocabulary Subject	Examination, reporting
6	5	Knowledge and understanding Skill for the subject	Mention the principles and the importance of each of them	theoretically Practical vocabulary Subject	Examination, reporting
7	5	Knowledge and understanding Skill for the subject	Objectives of extension work	theoretically Practical vocabulary Subject	Examination, reporting

8	5	Knowledge and understanding Skill for the subject	Introducing the process of communicating with audiences	theoretically Practical vocabulary Subject	Examination, reporting
9	5	Knowledge and understanding Skill for the subject	Factors affecting communication effectiveness	theoretically Practical vocabulary Subject	Examination, reporting
10	5	Knowledge and understanding Skill for the subject	Rural leadership	theoretically Practical vocabulary Subject	Examination, reporting
11	5	Knowledge and understanding Skill for the subject	Adoption and spread of modern technologies in agriculture	theoretically Practical vocabulary Subject	Examination, reporting
12	5	Knowledge and understanding Skill for the subject	Planning extension programs	theoretically Practical vocabulary Subject	Examination, reporting
13	5	Knowledge and understanding Skill for the subject	Agricultural extension methods and extension tools	theoretically Practical vocabulary Subject	Examination, reporting
14	5	Knowledge and understanding Skill for the subject	Evaluation of extension programs	theoretically Practical vocabulary Subject	Examination, reporting
15	5	Knowledge and understanding Skill for the subject	Agricultural extension in Iraq and its stages of development	theoretically Practical vocabulary Subject	Examination, reporting

11. Course Evaluation

Daily exam, submission of reports, semester exam, final exam (total score 100)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Fundamentals of Agricultural Extensic
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

1- Course Name: Horticultural science	
2- Course Code: APP1203	
3- Semester / Year: SPRING 2023-2024	
4- Description Preparation Date: 2024/1/25	
5- Available Attendance Forms: weekly attendance	
6- Number of Credit Hours (Total) / Number of Units (Total): 5HOURS/3.5 UNITS	
7- Course administrator's name (mention all, if more than one name)	
Name: Dr. Hifa Hameed Rasheed	
8- Course Objectives	
Course Objectives	**1. Identify the most important strategic gastrointestinal plants in the circumstances of Iraq.** **2. Identify the environmental conditions appropriate to growth of gastrinical plants.** **3. Learn about the most important ways to multiply gastroids.** **4. Learn about the most important gastroids used in th cultivation of gastrinical plants.**
9- Teaching and Learning Strategies	
Strategy	Teaching therolotical parts in class by using data show and some new methods, Teaching the practical part through field visits/work in the department's laboratories
10- Course Structure	
13. Course Structure	

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	For a week
a test	a lecture	Horticulture, history of the development of horticulture, economic and nutritional importance	General knowledge about horticultural plants	5	the first
a test	a lecture	Dividing horticultural plants	Botanical classification	5	the second
a test	a lecture	Suitable environmental factors and their impact on the production of horticultural crops (light, temperature, humidity, soil).	Influencing factors	5	the third
a test	a lecture	Methods of propagation of horticultural plants (sexual reproduction, vegetative, tissue culture).	Multiplication methods	5	the fourth
a test	a lecture	Types of horticultural plants	Its types	5	Fifth
a test	a lecture	Nurseries, field cultivation patterns (for fruits, vegetables, ornamental, medicinal and aromatic plants).	Multiplication methods	5	VI
a test	a lecture	Agricultural operations (irrigation, fertilization, thinning, resistance to bushes and pests...etc.)	Agricultural operations	5	Seventh
a test	a lecture	Cultivation under air-conditioned environments.	Farming methods	5	VIII

a test	a lecture	Reaping, picking, marketing	Post-harvest operations	5	Ninth
a test	a lecture	Custody transactions	Treasury transactions	5	The tenth
a test	a lecture	Storage and preservation	Storage methods	5	eleventh
a test	a lecture	An overview of breeding and improving horticultural plants.	Plant breeding	5	twelveth
a test	a lecture	Examples of fruit trees, vegetable and ornamental plants.	the fruit	5	Thirteenth
a test	a lecture	Examples of medicinal and aromatic plants.	Medicinal and aromatic	5	fourteenth
a test	a lecture	Conclusion	General knowledge about horticultural plants	5	Fifteenth

14.

11- Course Evaluation

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 Gardening and Garden Engineering 2017. Iyad Hani Ismail Al -Allaf. College of Agriculture and Forests - Mosul University. • Basics in Gardening Science and Garden Engineering 2017. Iyad Hani Ismail Al -Allaf and Iyad Tariq Shila Al -Alam. College of Agriculture and Forests - Mosul University. • Principles of 2014 gardening. Sami Karim Mohar Amin and Nisreen Khalil. College of Agricult Engineering Science - University of Baghdad.
Main references (sources)	Books and scientific research specialized gastrison plants.
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Youtube.com Springer.com

Course Description Form

1- Course Name: Analytical chemistry
2- Course Code: APP1106
3- Semester / Year: 2023_2024 – second semester
4- Description Preparation Date:2024/1/25
5- Available Attendance Forms: Attendance live
6- Number of Credit Hours (75) / Number of Units (3.5)
7- Course administrator's name (Dr. Maher Ahmed Abed)

Name: Dr. Maher Ahmed Abed
Email:

8- Course Objectives

Course Objectives	Enriching the student with knowledge related to chemical analysis, laws, theoretical and practical foundations, and modern and ancient methods of analysis.

9- Teaching and Learning Strategies

Strategy	

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2+3	Analytical chemistry	Introduction to laboratory instruments	lectures Theo. And EXP.	Daily and quart exam
2	2+3	Analytical chemistry	Introduction to quantitative chemistry	lectures Theo. And EXP.	Daily and quart exam
3	2+3	Analytical chemistry	Standard acid preparation	lectures Theo. And EXP.	Daily and quart exam
4	2+3	Analytical chemistry	titrations of an acid with a base (eg HCl with NaOH)	lectures Theo. And EXP.	Daily and quart exam
5	2+3	Analytical chemistry	Precipitation titrations	lectures Theo. And EXP.	Daily and quart exam
6	2+3	Analytical chemistry	Determination of chlorine in water samples	lectures Theo. And EXP.	Daily and quart exam
7	2+3	Analytical chemistry	Determination of bicarbonate in water samples	lectures Theo. And EXP.	Daily and quart exam
8	2+3	Analytical chemistry	Determination of calcium in water samples	lectures Theo. And EXP.	Daily and quart exam
9	2+3	Analytical chemistry	Oxidation – reduction titration	lectures Theo. And EXP.	Daily and quart exam
10	2+3	Analytical chemistry	Complexes formation titrations	lectures Theo. And EXP.	Daily and quart exam
11	2+3	Analytical chemistry	review	lectures	Daily and quart

				Theo. And EXP.	exam
12	2+3	Analytical chemistry	review	lectures Theo. And EXP.	Daily and quart exam
13	2+3	Analytical chemistry	final exam	lectures Theo. And EXP.	Daily and quart exam
14	2+3	Analytical chemistry	review	lectures Theo. And EXP.	Daily and quart exam
15	2+3	Analytical chemistry	review	lectures Theo. And EXP.	Daily and quart exam

11- Course Evaluation	
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)	كيمياء تحليلية – عبد المحسن الحيدري – 1987
Main references (sources)	كيمياء تحليلية – عبد المحسن الحيدري – 1987
Recommended books and references (scientific journals, reports…)	Douglas A. Skoog , West , Holler and Crouch, Fundamentals of Analytical Chemistry, 9th edition, page 14 - 47, 2014
Electronic References, Websites	-

Course Description Form

1- Course Name: Management and production of poultry
2- Course Code: APP3405
3- Semester / Year: 2023-2024
4- Description Preparation Date: 2024/1/25
5- Available Attendance Forms: Personally
6- Number of Credit Hours (75) / Number of Units (52)
7- Course administrator's name (mention all, if more than one name)

Name: Assistant Professor Dr. Ammar Farhan Musleh
Name: Dr. Sufyan Mahmoud Farhan

8- Course Objectives

- **The poultry management course explains the basic elements of poultry management and the features and concepts of each. It shows the types of poultry barns and the characteristics and equipment of each. It also explains in detail the requirements for incubation, care and production periods for broiler chickens, eggs and rearing. It also enables the student to know the records of the management of breeding operations and genetic improvement of breeding flocks, and enables him to distinguish between the symptoms of the most important diseases that affect poultry flocks in barns.**

9- Teaching and Learning Strategies

Strategy	
	Knowledge and understanding Identify the possibilities of field management and the correct management patterns for poultry farming specialists **Subject-specific skills:** Students can develop skills by gaining sufficient experience to produce Microsoft Word files in a sophisticated and artistic style. **Teaching and learning methods:** The student relies for his understanding and learning on in-person lectures during this academic year.

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Cognitive skills Intellectual skills personal skills	Environmentalfactors affecting poultry production	Theoretical practical	Daily exam homework
2	3	Cognitive skills Intellectual skills personal skills	Ventilation-temperature-humidity-lighting-density	Theoretical practical	Daily exam homework
3	3	Cognitive skills Intellectual skills personal skills	Poultry housing	Theoretical practical	Daily exam homework
4	3	Cognitive skills Intellectual skills personal skills	Poultry housing supplies	Theoretical practical	Daily exam homework
5	3	Cognitive skills Intellectual skills personal skills	Breeding broilers	Theoretical practical	Daily exam homework
6	3	Cognitive skills Intellectual skills personal skills	Optical program for broiler	Theoretical practical	Daily exam homework

7	3	Cognitive skills Intellectual skills personal skills	Feeding broilers	Theoretical practical	Daily exam homework
8	3	Cognitive skills Intellectual skills personal skills	Raising laying hens	Theoretical practical	Daily exam homework
9	3	Cognitive skills Intellectual skills personal skills	Nutritional photosynth program	Theoretical practical	Daily exam homework
10	3	Cognitive skills Intellectual skills personal skills	Management of laying floch production	Theoretical practical	Daily exam homework
11	3	Cognitive skills Intellectual skills personal skills	Mothers management	Theoretical practical	Daily exam homework
12	3	Cognitive skills Intellectual skills personal skills	Lighting and mating	Theoretical practical	Daily exam homework
13	3	Cognitive skills Intellectual skills personal skills	Administrative procedures the maternal herd	Theoretical practical	Daily exam homework
14	3	Cognitive skills Intellectual skills personal skills	Managing parts in hot clima	Theoretical practical	Daily exam homework
15	3	Cognitive skills Intellectual skills personal skills	Forced mowing	Theoretical practical	Daily exam homework

11- Course Evaluation

Monthly exam 60%, daily exam 20%, homework 10%, attendance 10%.

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	Poultry Management - Dr. Suhaib Al-Zubaidi
Main references (sources)	Commercial guide to raising laying hens Commercial guide to raising broiler breeders
Recommended books and references (scientific journals, reports…)	**Journal of Natural Sciences** **e indexation of the journal (ISSN-2)** **Journal of Agriculture**
Electronic References, Websites	-Journal of BIOLOGY Agriculture and Healthcare

Course Description Form

1- Course Name: English languages2
2- Course Code: APP1218
3- Semester : 2023−2024
4- Description Preparation Date:2024/1/25
5- Available Attendance Forms: presence
6- Number of Credit (15 Hours) / one Units (Total)
7- Course administrator's name (mention all, if more than one name)
Name: Anmar Nazar Hasan

8- Course Objectives

Course Objectives	• **The goal of this course is to empower students with linguistic and life skills** • **The course's integrated skills curriculum develops the student's self-confidence in order to survive.** • **Succeed in professional and social meetings within a global English-speaking community** • **Use language to express knowledge of the environmental and health impacts of mismanagement of hazardous waste**

9- Teaching and Learning Strategies

Strategy	The course is designed for first-year university students who want to use their English language For international communication. The course is based on material taken from New Headway Plus [Beginner], and articles Recent scientific news related to students' specialization. The four skills, namely listening, speaking, writing and reading, are developed during the training course

10- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English language dictionaries,	Specialized English language	In presence	Questions during lectures, quiz and exam in class
2	2	Understand texts using effective learning strategies for reading and vocabulary building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
3	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
4	2	Develop the English speaking skills	Specialized English language	In presence	Questions during lectures, quiz

		necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations			and exam in class
5	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
6	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
7	2	Understand texts using effective learning strategies for reading and vocabulary ‹building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
8	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English ‹language dictionaries	Specialized English language	In presence	Questions during lectures, quiz and exam in class
9	2	Understand texts using effective learning strategies for reading and vocabulary building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
10	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
11	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
12	2	Understand texts using effective learning strategies for reading and vocabulary	Specialized English language	In presence	Questions during lectures, quiz and exam in class

		building			
13	2	Develop the English speaking skills necessary to become a contributing participant in small group activities, large group discussions and ‹oral presentations	Specialized English language	In presence	Questions during lectures, quiz and exam in class
14	2	Understand texts using effective learning strategies for reading and vocabulary ‹building	Specialized English language	In presence	Questions during lectures, quiz and exam in class
15	2	Find and understand information about vocabulary, pronunciation, usage and grammar in reference texts, online resources and English ‹language dictionaries	Specialized English language	In presence	Questions during lectures, quiz and exam in class

11- Course Evaluation

Quizzes and talks

12- Learning and Teaching Resources

Required textbooks (curricular books, if any)	New Headway Plus [Beginner] by John and (1) Liz Soars, Oxford: Oxford University Press (2006), Modern scientific articles from the news (2) related to the students' specialty, and Internet links and videos related to the topics (3) discussed in General English and English for Specific Purposes lectures.
Main references (sources)	New Headway Plus [Beginner] by John and) Liz Soars, Oxford: Oxford University Press (2006),
Recommended books and references (scientific journals, reports…)	Morphy,A.J (1983) English Grammar in use. Cambridge:CUP
Electronic References, Websites	https://www.englishclub.com/grammar/verb-tenses.htm https://www.ego4u.com/en/cram- www.perfect-english-grammar.com/verb-tenses.htm https://en.wikipedia.org/wiki/Grammatical_tense

15. Course Structure

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	For a week
a test	a lecture	Horticulture, history of the development of horticulture, economic and nutritional importance	General knowledge about horticultural plants	5	the first
a test	a lecture	Dividing horticultural plants	Botanical classification	5	the second
a test	a lecture	Suitable environmental factors and their impact on the production of horticultural crops (light, temperature, humidity, soil).	Influencing factors	5	the third
a test	a lecture	Methods of propagation of horticultural plants (sexual reproduction, vegetative, tissue culture).	Multiplication methods	5	the fourth
a test	a lecture	Types of horticultural plants	Its types	5	Fifth
a test	a lecture	Nurseries, field cultivation patterns (for fruits, vegetables, ornamental, medicinal and aromatic plants).	Multiplication methods	5	VI
a test	a lecture	Agricultural operations (irrigation, fertilization, thinning, resistance to bushes and pests...etc.)	Agricultural operations	5	Seventh
a test	a lecture	Cultivation under air-conditioned environments.	Farming methods	5	VIII

a test	a lecture	Reaping, picking, marketing	Post-harvest operations	5	Ninth
a test	a lecture	Custody transactions	Treasury transactions	5	The tenth
a test	a lecture	Storage and preservation	Storage methods	5	eleventh
a test	a lecture	An overview of breeding and improving horticultural plants.	Plant breeding	5	twelveth
a test	a lecture	Examples of fruit trees, vegetable and ornamental plants.	the fruit	5	Thirteenth
a test	a lecture	Examples of medicinal and aromatic plants.	Medicinal and aromatic	5	fourteenth
a test	a lecture	Conclusion	General knowledge about horticultural plants	5	Fifteenth

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