

**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

2026-2025

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: Misan

Faculty/Institute: Agriculture

Scientific Department: Animal production

Academic or Professional Program Name:

Final Certificate Name:

Academic System: Bologna system and semester system

Description Preparation Date:

File Completion Date:



Signature:

Head of Department Name: Dr. Qusai Hakeem

Date:

Signature:

Scientific Associate Name:

Ahmed malik Jumaah

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Salah Abdulkhaleq

Date:

Signature:



Approval of the Dean



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1. Program Vision

The vision of the academic program is to appreciate High-quality education can be obtained be to acquire the knowledge and skills necessary to achieve success in their professional and personal lives, to develop scientific research that contributes to the advancement of society, and to enhance cooperation and partnerships with academic and professional institutions both locally and internationally.

The vision of the academic program is to provide high-quality education that enables students to acquire the knowledge and skills necessary for success in their professional and personal lives, to develop scientific research that contributes to the advancement of society, and to enhance cooperation and partnerships with academic and professional institutions both locally and internationally.

2. Program Mission

Providing distinguished and interdisciplinary education that keeps pace with global developments, contributes to preparing qualified graduates who possess the skills and knowledge necessary for the labor market, encourages scientific research and innovation, and promotes ethical values .Social responsibility among students Be.

To provide distinguished and interdisciplinary education that keeps pace with global developments, contributes to preparing qualified graduates who possess the skills and knowledge necessary for the labor market, encourages scientific research and innovation, and promotes ethical values and social responsibility among students.

3. Program Objectives

1. Teaching and training students on the latest practices in the field of animal production..
2. Teaching and training students on the latest practices in the field of animal production..
3. Providing the knowledge and skills necessary to handle animals and improve their productivity.
4. Providing the knowledge and skills necessary to handle animals and improve their productivity.
5. Enhancing scientific research in areas such as animal nutrition, care, and reproduction..
6. Promoting scientific research in areas such as animal nutrition, care, and breeding..
7. Development of programs for farm management and productivity improvement.
8. Development of programs for farm management and productivity

improvement..

9. Enhancing students' understanding of professional ethics in the field of animal production.
10. Enhancing students' understanding of professional ethics in the field of animal production..
11. Encouraging interaction with the industry and the local community to improve animal production applications.
12. Encouraging interaction with the industry and the local community to improve applications in animal production..
13. Enhancing interaction with the natural environment and preserving livestock.
14. Enhancing interaction with the natural environment and preserving livestock..
15. Providing experiential and practical educational opportunities for students in areas such as animal breeding and care.
16. Providing experiential and practical educational opportunities for students in areas such as animal breeding and care..
17. Enhancing knowledge of modern technologies in farm management and improving animal healthcare.
18. Enhancing knowledge of modern technologies in farm management and improving animal healthcare..
19. Developing students' abilities to assess the impact of environmental and economic factors on animal production.
20. Developing students' abilities to assess the impact of environmental and economic factors on animal production.

4. Program Accreditation

None

5. Other external influences

Ministry of Higher Education and Scientific Research

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	۱۲	۲۲	۱۲.۷۹	Core
College Requirements	۲۲	۷۱	۴۱.۲۷	Core
Department Requirements	۲۷	۷۹	۴۵.۹۴	Core

Summer Training				Core
Other				

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
Year 1	UM102	English Language	2	-
Year 1	UM104	Democracy and Human Rights	2	-
Year 1	ANPR123	Principles of Animal Production	2	3
Year 1	ANCH121	Analytical Chemistry	2	3
Year 1	MATH111	Mathematics	2	3
Year 1	ZOOL126	Zoology	2	3
Year 1	UM101	Arabic Language	2	-
Year 1	UM103	Computer	1	2
Year 1	DOBR112	Poultry	2	3
Year 1	PLPR122	Plant Protection	2	3
Year 1	ORCH125	Organic Chemistry	2	3
Year 1	FICR115	Field Crops	2	3
Year 2	CA217	Biochemistry	2	3
Year 2	HA215	Principles of Fish Science	2	3
Year 2	CA213	Principles of Microbiology	2	3
Year 2	AAP216	Animal Production Mechanization	2	3
Year 2	UM211	Ba'ath Party Crimes in Iraq	2	-
Year 2	UM212	Computer Applications 2	1	2
Year 2	FB223	Fish Breeding and Production	2	3

Year 2	FOCP246	Forage Crops and Pastures	2	3
Year 2	DS225	Principles of Dairy Science	2	3
Year 2	GE226	Genetics	2	3
Year 2	UM221	Arabic Language	2	-
Year 2	UM222	English Language 2	2	-
Year 3	ANNU314	Animal Nutrition	2	3
Year 3	PPTE315	Poultry Products Technology	2	3
Year 3	POPH316	Poultry Physiology	2	3
Year 3	REPH317	Reproductive Physiology	2	3
Year 3	FERA321	Fodder and Rations	2	3
Year 3	ANPH318	Animal Physiology	2	3
Year 3	MEVI318	Medical and Veterinary Insects	2	3
Year 3	ANEB320	Animal Environment and Behavior	2	-
Year 3	ECAP321	Animal Production Economics	3	-
Year 3	ANDI323	Animal Diseases	2	3
Year 3	HAHM322	Hatching and Hatchery Management	2	3
Year 3	DAAE319	Experimental Design and Analysis	2	3
Year 4	POPR441	Poultry Management and Production	2	3
Year 4	BUPR442	Buffalo	2	-

		Production		
Year 4	SHGP443	Sheep and Goat Production	2	3
Year 4	ENGL444	English Language	1	-
Year 4	POBN445	Poultry Nutrition	2	3
Year 4	MEPR446	Beef Cattle Production	2	3
Year 4	MTSC447	Meat Science	2	3
Year 4	DACP448	Dairy Cattle Production	2	3
Year 4	MOBI449	Molecular Biology	2	3
Year 4	PODI450	Poultry Diseases	2	3
Year 4	PAMA451	Pasture Management	2	3
Year 4	POBR452	Poultry Breeding and Improvement	2	3

8. Expected learning outcomes of the program

Knowledge	
Students learn about the legislation and standards that govern the livestock production industry, including food safety and animal welfare.	.Deep understanding of agricultural legislation and practices
Deep understanding of different animal species and their natural environments, and how these factors affect their health and productivity.	Knowledge of animal types and their ecosystems
Use and application of modern technology to improve animal productivity, such as artificial insemination techniques and feed management.	Technology in animal production
Learning how to manage farms efficiently, including production planning, and	Farm management and strategic planning

managing human and financial resources.	
Developing skills in performance evaluation and providing consultations to improve animal productivity and quality.	Assessment and consulting in animal production
Building capacities in conducting scientific research and applying research results in practical work.	Scientific research and practical applications
Understanding the fundamentals of sustainability in animal production and how to apply sustainable practices in daily work	Sustainability and sustainable development
Developing skills in analyzing economic data and evaluating the economic aspects of animal production.	Economic analysis and evaluation
Skills	
The ability of students to manage farms and organize livestock production processes efficiently, including production planning and human resource management.	Management and leadership skills
The ability to analyze data and evaluate the performance of livestock production processes, and make strategic decisions based on data and analysis.	Analytical and evaluation skills
The ability to communicate effectively with various stakeholders, including farmers, agricultural workers, and government entities.	Communication and interpersonal skills
The ability to develop new and innovative solutions to improve animal productivity and enhance the effectiveness of agricultural	Innovation and creativity skills

processes.	
The ability to design and implement scientific research in the field of livestock production, and apply research findings in practical work.	Research and development skills
The ability to negotiate and solve complex problems facing livestock production effectively and innovatively.	Negotiation and problem-solving skills
The ability to apply sustainable agricultural practices and improve the environmental and economic performance of farms.	Sustainability skills and sustainable development
The ability to use technology and computing tools to enhance and manage livestock production processes.	Technology and computing skills
Ethics	
A deep respect for animals and a commitment to global animal welfare standards, with a focus on the health and well-being of animals.	Respect and animal welfare
Commitment to sustainable agricultural practices that preserve the environment and support the sustainable development of natural resources.	Sustainability and environmental responsibility
Commitment to high ethical standards in all aspects of work in the field of animal production, including research and customer interactions.	Integrity and Professional Ethics
Striving for innovation and improvement of agricultural processes through the application of modern technologies and new ideas.	Innovation and Continuous Development
Willingness to engage in lifelong learning and develop personal	Continuous Learning and Personal Development

and professional skills to maintain competitiveness and lasting success.	
The ability to work as part of a team and collaborate with colleagues and specialists in related fields to achieve common goals.	Collaboration and Teamwork
Commitment to professionalism in all aspects, from dealing with clients to project management and crisis handling.	Professionalism and Dedication
Appreciation and respect for cultural and social diversity and the ability to interact effectively with people from different backgrounds.	Diversity and respect for different cultures

9. Teaching and Learning Strategies	
By encouraging students to participate in interactive educational activities such as discussions and hands-on activities.	Active and interactive learning
By organizing students into groups to work on joint projects and solve problems, enhancing their learning through interaction with each other.	Cooperative learning
Presenting real problems and challenges that students must solve using the knowledge and skills acquired.	Problem-based learning
Enhancing students' abilities to develop their personal skills for learning and independence.	Self-directed learning
Organizing practical projects from which students learn how to apply theoretical concepts in practical contexts.	Project-based learning
Providing opportunities for practical and experimental learning that enhance students'	Experiential learning

understanding of the subjects.	
sing technology to enhance interaction and deliver educational content effectively and engagingly.	Technology in learning
Using diverse and continuous assessment methods to measure students' progress and understanding of the subjects.	Comprehensive assessment

10. Evaluation methods

1. Daily exams (quizzes)
 2. Monthly exams
 3. Practical exams
 4. Final practical and theoretical exams
- Evaluation through summer training in government departments by having the student submit a detailed report on the knowledge and skills acquired during the training.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	Plant protection	Plant Diseases			1	
Assistant Professor	Fish and Marine Resources	Fish and Marine Resources			1	
Assistant Professor	Soil Science and Water Resources/Soil Physics	Soil Science and Water Resources / Soil Physics			1	
Doctor Teacher	Horticulture	Horticulture and Palm Trees			1	

Teacher	Animal Production	Animal Production			1	
Teacher	Horticulture	Horticulture and Palm Trees			3	
Assistant Teacher	Animal Production	Animal Production			1	
Assistant Teacher	biology Sciences	Microbiology			1	
Assistant Teacher	biology Sciences	Public animal			1	
Assistant Teacher	Cereal Crops	Cereal Crops			1	

Professional Development	
Mentoring new faculty members	
Guidance for new faculty members	
Improving teaching methods to make them more effective, conducting research, and serving the community	
Professional development of faculty members	
Organized to update knowledge and skills in areas such as agricultural technology, farm management, and scientific research	Workshops and training courses
An opportunity to exchange experiences and knowledge with other researchers in the field of animal production.	Participation in conferences and scientific seminars
Providing resources and funding to support advanced research in vital areas related to animal production.	Supporting research and scientific projects
Learning to use technology in education and research, including the use of distance learning platforms and modern technological tools.	Distance learning and technology in education
Supporting and guiding new faculty members and encouraging them to achieve	Academic supervision and guidance

academic and professional success.	
Enhancing collaboration with other universities and institutions at the local and international levels to exchange knowledge and experiences.	Communication and academic partnerships
Participating in the development and improvement of curricula to meet the needs of the labor market and society.	Evaluation and development of academic programs
Encouraging members to publish in high-impact scientific journals and participate in collaborative research projects.	Scientific publishing and contribution to research
Organized to update knowledge and skills in areas such as agricultural technology, farm management, and scientific research.	Workshops and training courses
An opportunity to exchange experiences and knowledge with other researchers in the field of animal production.	Participation in conferences and scientific seminars
Providing resources and funding to support advanced research in vital areas related to animal production.	Supporting research and scientific projects
Learning to use technology in education and research, including the use of distance learning platforms and modern technological tools.	Distance learning and technology in education
Supporting and guiding new faculty members and encouraging them to achieve academic and professional success.	Academic supervision and guidance
Enhancing collaboration with other universities and institutions at the local and international levels to exchange knowledge and experiences.	Communication and academic partnerships
Participating in the development and improvement of curricula to meet the needs of the labor market and society.	Evaluation and development of academic programs
Encouraging members to publish in high-impact scientific journals and participate in collaborative research projects.	Scientific publishing and contribution to research
Organized to update knowledge and skills in areas such as agricultural technology, farm management, and scientific research.	Workshops and training courses

12. Acceptance Criterion

Central

13. The most important sources of information about the program

1. Methodological books
2. Electronic copies of books and journals
3. Scientific reports in the field of animal production
4. Scientific bulletins and research published by reputable universities

14. Program Development Plan

Conduct a comprehensive evaluation of the current animal production program, including analysis of academic performance, review of curricula and study programs, and survey of opinions from students and faculty members	Situation assessment
Identifying specific goals to be achieved through the development process, such as improving the quality of education, enhancing scientific research, and promoting interaction with industry.	Identify priorities and strategic goals
Redesigning and developing curricula to ensure they cover the latest knowledge and developments in the field of animal production.	Developing and updating curricula
Providing support for student and faculty research, and promoting research projects that contribute to the development of sustainable agricultural practices and innovation in animal production.	Enhancing scientific research and innovation
Developing strategic partnerships with animal production industries and the local community to enhance opportunities for applied learning and on-the-ground training.	Enhancing interaction with industry and the community
Providing training opportunities and workshops for faculty members to improve teaching, research, and management skills.	Developing faculty skills

Establish a continuous system for evaluating program performance and monitoring the achievement of strategic objectives, making adjustments as necessary to improve performance.	Evaluating and monitoring performance
Developing marketing strategies to attract potential students and enhance the academic program's reputation at the industry and community levels.	Promotion and Marketing
Striving to obtain recognized academic accreditations to ensure quality and professional standards for the animal production program.	External Evaluation and Accreditation

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First	UM102	English Language	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM104	Democracy and Human Rights	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANPR123	Animal Production	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANCH121	Analytical Chemistry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MATH111	Mathematics	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ZOOL126	Animal Science	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Second Stage	UM101	Arabic Language	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM103	Computer Science	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DOBR112	Domestic Birds	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PLPR122	Plant protection	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ORCH125	Organic Chemistry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FICR115	Cereal Crops	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CA217	Biochemistry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HA215	Principles of Ichthyology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CA213	Principles of Microbiology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	AAP216	Mechanization of Animal Production	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	UM211	Crimes of the Ba'ath Party in Iraq	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM212	Computer Applications 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FB223	Fish Breeding and Production	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FOCP246	Forage and pasture crops	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DS225	Principles of Dairy Science	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	GE226	Genetics	Core	✓	✓	✓				✓	✓	✓	✓		
	UM221	Arabic Language	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM222	English Language 2	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Three stag	ANNU314	Animal Nutrition	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PPTE315	Poultry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		Product Technology													
	POPH316	Physiology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	REPH317	Reproductive Physiology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FERA321	Feeds and Rations	Core	✓	✓	✓				✓	✓	✓	✓		
	ANPH317	Animal Physiology	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MEVI318	Medical and Veterinary Insects	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANEB320	Animal Environment and Behavior	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ECAP321	Economics of Animal Production	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	ANDI323	Animal Diseases	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HAHM322	Hatching and Hatchery Management	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DAAE319	Design and Analysis of Experiments	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Four stag	POPR441	Management and Production of Poultry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	BUPR442	Buffalo Production	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SHGP443	Production of Sheep and Goats	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ENGL444	English Language	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	POBN445	Feeding of Poultry	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

MEPR446	Production of Meat Livestock	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MTSC447	Meat Science	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DACP448	Production of Dairy Cows	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOBI449	Molecular Life Science	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PODI450	Poultry Diseases	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PAMA451	Range Management	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
POBR452	Breeding and Improvement of Domestic Birds	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	English language		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UM 102		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	One
Administering Department	Animal Production	College	Agriculture
Module Leader	Name: farhan jasm	e-mail	
Module Leader's Acad. Title	Assist. Prof.	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	1/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1-The aim of this course is to provide English learners with integrated language skills such as reading, listening and writing resulting in a level of basic language knowledge. 2-This course will focus on grammar rules, basic word knowledge and usage, reading comprehension, reading out of the lesson, and Paragraph writing. 3- A student may be able to listen to native speakers and speak English Language. 4- A student may be able to write and have creativity in his writing.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1 - Uses expressions of Quantity in elementary level of English. 2- Constructs sentences in Present Perfect Tense, Simple Future Tense and Going to Future Tense both in an oral and written task. 3- Defines basic Modals and employ them in elementary level of communication and writing skills. 4- Translates sentences in elementary level from English to another language. 5- Interprets the texts written in elementary level of English.
Indicative Contents المحتويات الإرشادية	Language is a rule-governed behavior. It is defined as the comprehension and/or use of a spoken (i.e., listening and speaking), written (i.e., reading and writing), and/or other communication symbol system (e.g., American Sign Language). Spoken and written language are composed of receptive (i.e., listening and reading) and expressive (i.e., speaking and writing) components. Spoken language, written language, and their associated components (i.e., receptive and expressive) are each a synergistic system comprised of individual language domains (i.e., phonology, morphology, syntax, semantics, pragmatics) that form a dynamic integrative whole Phonology study of the speech sound (i.e., phoneme) system of a language, including the rules for combining and using phonemes. Morphology study of the rules that govern how morphemes, the minimal meaningful units of language, are used in a language. Syntax the rules that pertain to the ways in which words can be combined to form sentences in a language. Semantics the meaning of words and combinations of words in a language.

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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Enable students to recognize: 1 - Enabling students to communicate effectively and appropriately in real-life situations. 2 - Enabling students to use the English language effectively for the purpose of study across the curriculum. 3 - Enabling students to develop and integrate the use of the four language skills: reading, listening, speaking and writing. 4 - Enabling students to develop interest in and learn about literature. 5- Enable students to review and reinforce the structure that has already been learned

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	٣٢	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	٢
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	١٨	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	٥٠		

Module Evaluation تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning

					Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	English preposition
Week 2	Passive voice
Week 3	Negative
Week 4	If clause (conditional) sentences
Week 5	Kinds of sentences
Week 6	A- Simple tense
Week 7	B-compound tense
Week 8	c- complex tense
Week 9	The use of so 'and neither'
Week 10	Singular + plural
Week 11	How to answer causations
Week 12	Number + Roman Numerals
Week 13	Every day sentences

Week 14	The verb to be
Week 15	How to write a composition
	Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Yule, G. (2015). Oxford practice grammar advanced. Oxford University Press. Alexander, L. G. (2019). Longman English grammar practice. Addison Wesley.-	Yes
Recommended Texts	Various university research and dissertations in the English language related to animal productio	
Websites	https://agendaweb.org/listening/dictations.html	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Module description form

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Democracy and Human Rights		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOB104		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	UGI	Semester of Delivery	One
Administering Department	Animal Production	College	Agriculture
Module Leader	Name: Hussein zegheir	e-mail	
Module Leader's Acad. Title	Ass. Lec.	Module Leader's Qualification	M.SC.
Module Tutor	N.A	e-mail	N.A
Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	01/10/2024	Version Number	1.0

Relation with other Modules			
الأخرى الدراسية المواد مع العلاقة			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

الإرشادية والمحتويات التعلم ونتائج الدراسة المادة أهداف

Module objectives الدراسية المادة أهداف	1.Introducing students to the concept of freedom and democracy and its emergence. 2.Introducing students to human rights and democracy in ancient civilizations. 3. Introducing students to human rights in the divine laws and religions. 4.To emphasize the characteristics and characteristics of human rights and the extent of their application in power. 5.Emphasizing the application of freedom and democracy in its correct sense according to the societal perspective.
Learning Outcomes الدراسية للمادة التعلم مخرجات	1- The student should know the concept of rights, their laws and applications. 2- The student should know how to participate in the dissemination of rights and their application with real real work. 3- The ability to use rights as a means for peaceful coexistence between the components of society and all Creatures. 4. The ability to share these rights with others. 5. The ability to analyze and define the concept of freedom and distinguish between different types of freedoms. 6. Interacting with issues of freedoms at the national and international levels and influencing the formation of public opinion.
Indicative Contents الإرشادية المحتويات	Fundamental and non-fundamental rights and freedoms (f) Freedom of association and of peaceful assembly (art. 15); political rights Human rights and international humanitarian law

Learning and Teaching Strategies

والتعليم التعلم استراتيجيات

الاستراتيجيات:	1-Participationin preparation in the classroom 2- Method of questions and answers in the classroom 3- Duties Reports
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	٣
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	١8	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	٥٠		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Weekly Theoretical Curriculum	
	Material Covered
Week 1	Definition of freedom and its meanings
WEEK 2	Distinguish between freedom and anarchism
Week 3	A study in the most important civil liberties
Week 4	A study in the most important political freedoms
Week 5	What is meant by democracy, the historical dimension
Week 6	Forms of Democracy
Week 7	Criteria for a Democratic State
WEEK	Democratic Constitution
Week 9	The State and its Forms
WEEK	Institutions needed by democratic states
Week 11	Democratic elections (concept – conditions –requirements – purposes)
WEEK	Parties and electoral systems
WEEK	Lobby groups (what they are , types , and means)
WEEK	Representing Minorities in Democratic Governance
WEEK	Exam

Learning and Teaching Resources		
learning and teaching resources;		
	Text	Available in the Library?
Required Texts	Diamond L. & M. F. Plattner, eds., (2009), Democracy. A Baltimore Johns Hopkins University Press.	Yes
Recommended	The concept of public freedoms and human rights, its	

Texts	historical and intellectual framework and philosophical, and its basic guarantees	
card-websites	http://ghrorg-learning.blogspot.com	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Module description form

الدراسية المادة وصف نموذج

Module Information			
معلومات المادة الدراسية			
Module Title	Animal Production		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ANPR123		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	UGI	Semester of Delivery	
Administering Department	Animal Production	College	College of Agriculture
Module Leader	duaa ali hussain	e-mail	duaaali@uomisan.edu.iq
Module Leader's Acad. Title	Ass. Lecturer	Module Leader's Qualification	M.Sc.
Module Tutor	N.A	e-mail	N.A
Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	01/10/2024	Version Number	1.0

Relation with other Modules			
الأخرى الدراسية المواد مع العلاقة			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents
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الإرشادية والمحتويات التعلم ونتائج الدراسة المادة أهداف

Module objectives الدراسية المادة أهداف	Enables the student to gain knowledge: 1. The importance of the science of the principles of animal production, which deals in detail with the economic importance of livestock and types of global and local livestock, and their management and care. 2. Studying the types and importance of other farm animals such as buffaloes, sheep and goats, and their management and care.
Learning Outcomes الدراسية للمادة التعلم مخرجات	1. Familiarity with general information about animal production and its economic and nutritional importance. 2. Discuss the factors affecting production efficiency and how to improve it. 3. Explain and clarify the obstacles facing livestock and ways to improve it. 4. Introducing students to livestock, their types, and how to care for them. 5. Introducing students to dual-purpose cattle and local and international sheep and goat breeds. 6. Defining how to establish and care for a flock of sheep and goats. 7. Defining the specifications of global and local buffalo and their different breeds. 8. We are introducing students to the importance of poultry projects and meat and egg production. 9. Providing an overview of Farm animals feed materials and the process for preparing balanced nutritional rations. 10. Explanation and clarification of health programs for animals, how to prevent diseases and ways to improve the health of animals and increase their productivity. 11. A detailed explanation of the importance of raising calves and heifers and providing the necessary needs for their rearing. 12. A detailed description of the reproductive system of cows and a statement of its importance in the reproductive process, and how to increase the reproductive efficiency of the animal and increase the birth rate. 13. Explain animal breeding and improvement programs and discuss the importance of breeding, selection, and exclusion of weak animals. 14. A detailed explanation of the importance of camels and the equine species and how to manage and care for them.
Indicative Contents الإرشادية المحتويات	Indicative content includes the following. 1. Disseminating the culture of livestock's nutritional and economic importance as a major source of agricultural wealth and having a major role in the Country's economy. 2. Following modern methods and techniques in animal management, milking

	operations, and large animal slaughterhouses. - Teaching students the role of successful management (human factor or the breeder himself) of small and large ruminant fields. - Spreading the culture of benefiting from animal by-products such as manure waste and animal waste, and benefiting from animals in work. - Identifying the types of farm animals and the most important projects related to their breeding. - Solving administrative problems in cattle, sheep, and goat breeding fields.
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Learning and Teaching Strategies والتعليم التعلم استراتيجيات	
الاستراتيجيات:	- Enabling students to think and analyze topics related to the intellectual framework of the Principles of Animal Production subject - Enabling students to think and analyze topics related to animal species and the most important projects related to their breeding. - Enabling students to think and analyze topics related to identifying administrative problems in animal fields and working to address them. - Enabling students to think and analyze to identify the role of management (the role of the human factor or the breeder himself) in the success of animal fields of various types.

Student Workload (SWL)			
اسبوعا ١٥ لـ محسوب للطالب الدراسي الحمل			
Structured SWL (h/sem) الفصل خلال للطالب المنتظم غير الدراسي الحمل	78	Structured SWL (h/w) أسبوعيا للطالب المنتظم غير الدراسي الحمل	5
Unstructured SWL (h/sem) الفصل خلال للطالب المنتظم غير الدراسي الحمل	97	Unstructured SWL (h/w) أسبوعيا للطالب المنتظم غير الدراسي الحمل	6
Total SWL (h/sem) الفصل خلال للطالب الكلي الدراسي الحمل	175		

Module Evaluation					
الدراسية المادة تقييم					
		Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative Assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12.	LO #3, #4 and #6, #7
	Projects	1	10% (10)	continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative Assessment	Midterm Exam	2hr	10% (10)	7	1-7
	Final Exam	3hr	%50 %50	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Lab. Syllabus
Lab Weekly Curriculum (Filed Field)

Delivery Plan (Weekly Syllabus)
Weekly Theoretical Curriculum

	Material Covered
Week 1	Economic importance of animal products
WEEK 2	Cows and Buffalo:
Week 3	Cows and their types
Week 4	Begging in cows
Week 5	Calf Care
Week 6	Nutrition
Week 7	Milk production
WEEK	Field Operations
Week 9	Records
WEEK	DWELLINGS
Week 11	the RAM.
WEEK	Sheep and goats:
WEEK	Economic importance
WEEK	Classification and Methods of Classification
WEEK	- Breeding? - Yeah.
WEEK	Exam

	Material Covered
Week 1	Going to the animal field – the first time
WEEK 2	Field operations on animals
Week 3	Livestock breeds of all kinds (milk – meat– dual-purpose)
Week 4	Animal Dwellings
Week 5	Going to the animal field – the second time
Week 6	Quarterly Exam - First
Week 7	Reproduction and Sexual Puberty
WEEK	Pregnancy and childbirth
Week 9	Going to the animal field – the third time
WEEK	Nutrition of newborns

Learning and Teaching Resources

learning and teaching resources;

	Sheep and goat breeds	Available in the Library?
Required Texts	Principles of Animal Production, written by Dr. Muzaffar Nafie Al-Sayegh - Dr. Taha Jassem Al-Taha - Dr. Suhaib Saeed Alwan Al-Zubaidi(1987).	Yes
Recommended Texts	Basics of animal production, written by A. Dr... Ahmed Suleiman Mahmoud and A. Dr... Mahmoud Riyad Al Mahdi (2013).	No
card-websites	https://nicehatchincubators.com/the-principles-of-poultry-husbandry/	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Analytical Chemistry		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code	ANCH121		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	UGI	Semester of Delivery	
Administering Department	Animal Production	College	College of Agriculture
Module Leader	Dr. Yahya Ajib Oudah	e-mail	Yahya.ajjb@uomisan.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	N.A	e-mail	N.A
Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	01/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	The student's knowledge of the scientific foundations of analytical chemistry, including the devices used, chemicals, and the common cause of common tools.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Definition the student to Organic chemistry, Properties of the element carbon, Types of chemical bonds . Definition the student to Hybridization. Definition the student to Alkanes , Name them , isomers, physical and chemical properties. Preparation of alkanes, cycloalkanes.
Indicative Contents المحتويات الإرشادية	Introduction, principles and basics of analytical chemistry, introduction to analytical chemistry and gravimeter , Volumetric analysis - solutions – calculation. Methods of expressing concentration (molarity, standard, normal, weight and volume ratio) , Acids and bases.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The modern teaching strategy includes achieving learning objectives in general and teaching chemical concepts in particular, as well as the difficulties students face in understanding and acquiring organic chemistry concepts, and addressing the difficulties by defining organic chemistry concepts and helping students acquire the correct chemical concepts..
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	66	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	2	10% (10)	Continuous	All
	Report	2	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Analytical Chemistry and Equivalent Gravimetry
Week 2	Volumetric analysis - solutions - calculations
Week 3	Methods of expressing concentration (molarity, standard, normality, weight and volume ratio)
Week 4	Acids and bases
Week 5	pH - Degree of ionization / Quiz 1
Week 6	First exam
Week 7	Hydrolysis of salts - types of salts
Week 8	Buffered Solutions - Guides
Week 9	Setting the equivalence point
Week 10	Oxidation and reduction corrections / Quiz 2
Week 11	Volumetric analysis processes
Week 12	Types of corrections
Week 13	Gravimetric analysis - Gravimetric coefficient
Week 14	Precipitating reagents - post-precipitation
Week 15	Second exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	The principle of quantitative volumetric analysis and the law of titration
Week 2	Methods Expressing Concentration
Week 3	Determine the concentration of hydrochloric acid (HCl) using Standard solution of sodium carbonate Na_2CO_3
Week 4	Prepare hydrochloric acid solution
Week 5	Prepare and titrate a 0.1 N solution of hydroxide Sodium solution
Week 6	Prepare sodium hydroxide solution
Week 7	Determine a mixture of carbonate and bicarbonate

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Analytical Chemistry for Students of the College of Agriculture and Forestry, written by Dr. Nabil Fadel Khalil (1993) 2- Foundations of Analytical Chemistry, written by Dr. Muwayd Qasim Al-Abaji - Dr. Thabet Saeed Al-Ghabsha	Yes
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Mathematics		Module Delivery	
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar	
Module Code	STAT124			
ECTS Credits	5			
SWL (hr/sem)	125			
Module Level	UGI	Semester of Delivery		
Administering Department	Animal Production	College	College of Agriculture	
Module Leader	Dr. Yahya Ajib Oudah		e-mail	Yahya.ajjb@uomisan.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	N.A		e-mail	N.A
Peer Reviewer Name	N.A		e-mail	N.A
Scientific Committee Approval Date	/ /2024	Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None		Semester
Co-requisites module	None		Semester

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	- Describe the shapes and types of matrices - Learn how to solve matrices. - Know how to multiply matrices and their quantities. - Provide students with a scientific background related to differential and integral calculus
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Familiarize yourself with the statistical methods of agricultural operations, their organization, presentation and analysis. Familiarize yourself with the measures of concentration and dispersion related to agricultural production. The student will acquire the skills to know the normal distribution curve and the standard curve
Indicative Contents المحتويات الإرشادية	Orthogonal Matrices, Square Matrices, Conjugate Matrix, Determinants Cramer's Rule, Derivatives, Trigonometric Functions, Exponential Functions, Logarithmic Functions

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Providing students with the basics and lectures related to the subject Keeping up with developments by using modern methods in slide presentations and conveying information in a more clear manner Putting out thinking questions during lectures including (what, how, when and why)
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Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4 , 9	LO #١ , #2 , # 3 and #4, #٥
	Assignments	4	15% (10)	2 , 6 , 10 , 12	LO #٢ , #٣ and #٤ , #٥
	on site Assignments	2	10% (10)	5 , 13	
	Report	1	10% (10)	15	LO #٢ , #٣ and #٤
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المناهج الاسبوعي النظري	
	Material Covered
Week 1	The concept of matrices
Week 2	Gear matrices and their applications
Week 3	Types of matrices, examples and applications / Quiz 1
Week 4	Orthogonal matrix
Week 5	Square matrix / Quiz 2
Week 6	Conjugate matrix
Week 7	Determinants

Week 8	Cramer's rule
Week 9	Derivatives
Week 10	Equation of the tangent line / Quiz 3
Week 11	Derivative of trigonometric functions
Week 12	Semester exam
Week 13	Functions
Week 14	Logarithmic functions
Week 15	integration
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)		
المنهاج الاسبوعي للمختبر		
	Material Covered	
Week 1		
Week 2		
Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Ayres, Frank and Mendelson, Elliott., (2012), Schaum’s Outline of Calculus, 6th Edition. US: McGraw- Hill Thomas, Jr., Weir, Hass, (2014), Thoma’s Calculus, 13th Edition. Pearson	Yes
Recommended Texts	كتاب الرياضيات للاقتصاد والعلوم الادارية والمالية ٢٠١٥ الدكتور محمود مهدي البياتي والدكتور دلال القاضي	Yes
Websites	Mathway Algebra Problem Solver	

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Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Zoology		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	ZOOL126		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	
Administering Department	Animal production	College	Agriculture
Module Leader	Hameed Majeed Radhi	e-mail	hameed.majeed@uomisan.edu.iq
Module Leader's Acad. Title	Professor	Module Leader's Qualification	
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	1/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	Zoology involves the study of the structure and function of animals, biodiversity and ecology of ecosystems, and conservation biology. This knowledge is essential in order to understand, protect and manage species, habitats and ecosystems. The course aims to provide students with a wide skillset, and covers both local and global terrestrial and aquatic zoological issues whilst encouraging both a theoretical and applied approach to the subject. This course offers great opportunities for students interested in environment and species management or in becoming part of the global scientific community.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Important: Write at least 6 Learning Outcomes, better to be equal to the number of study weeks. 1. Learn the importance of studying zoology. 2. Learn about the characteristics of the animal kingdom. 3. Learn about the characteristics and components of animal cells. 4. Description of cell division and its types. 5. Learn the rules of scientific nomenclature. 6. Discuss the physical and chemical nature of protoplasm. 7. Learn about the characteristics of animal phylums.
Indicative Contents المحتويات الإرشادية	This course is an introduction to the scientific study of animals. Students will explore the wonders of the animal kingdom through investigations of the physiology, reproduction, development, form and function of a wide diversity of both invertebrates and vertebrates. Students will learn through lectures and videos, practicals and independent study. This major will provide students with a sound knowledge and understanding of animal structure and function and the evolutionary processes that have engendered animal diversity. Zoologists also study physiology, reproduction, behaviour, community ecology and molecular genetics. Zoology underpins society's interest in conservation and marine science including major contributions to current research in ecosystem management.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	1- Enabling students to think and analyze topics related to the intellectual framework of the subject administration of zoology. 2- Enabling students to think and analyze topics related to measuring productivity. 3- Enabling students to think and analyze how to provide environmental conditions that affect animal phylums and their relationship to their production and health status
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	General introduction on zoology and its relationship to other sciences
Week 2	Research Method
Week 3	The origin of life and its theories
Week 4	Protoplasm
Week 5	Cytoplasm
Week 6	Oh. Um, cell division.
Week 7	Eggs of the living and their classification
Week 8	Enzymes and their role in the life of organisms
Week 9	Chemical coordination in biology and how the nervous system is done

Week 10	Organic evolution
Week 11	Buffalo
Week 12	Sheep and Goats:
Week 13	Economic Importance
Week 14	Classification and Classification Methods
Week 15	Reproduction
Week 16	Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Simple microscope
Week 2	Electron microscope J
Week 3	Preparing the chip for examination
Week 4	Plant and animal cell
Week 5	Aspects of life
Week 6	BLOOD!
Week 7	Frog
Week 8	Animal Kingdom
Week 9	Preparing models for each division of the animal kingdom
Week 10	Basic Principles for the Construction of Ornamental Aquariums

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Zahir,E. and Najam, S.(1989). Zoology. Book.	Yes
Recommended Texts	Various classification research and university theses, zoology.	yes
Websites	1- https://www.britannica.com/science/zoology 2- https://www.sciencedirect.com/journal/zoology	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Computer applications/1		Module Delivery
Module Type	B		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	UM-103		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	1	Semester of Delivery	2
Administering Department		College	College of Agriculture
Module Leader	Abbas luaibi obaid	e-mail	abbas.alrajhe@uomisan.edu.iq
Module Leader's Acad. Title	Asst.Lecturer	Module Leader's Qualification	Msc.Engineering
Module Tutor	Abbas luaibi obaid	e-mail	abbas.alrajhe@uomisan.edu.iq
Peer Reviewer Name	Department of Animal Production	e-mail	
Scientific Committee Approval Date	1/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Objectives أهداف المادة الدراسية	Introducing the student to the basics of computers and types of computers Its classification, operating systems and objectives. As for the goals of the practical side It is to provide the student with skills in using operating and application programs and how to maintain computer security.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 1. The basics, basic ideas and concepts necessary to understand the structure of the computer. 2. Explain the basic components of the computer and learn about them in detail. 3. Explain computer security and explain malware and how to prevent it. 4. Understand how to deal with programs safely. 5. Explain operating systems and learn about them. 6. Explain how to deal with the Windows system and how to install it on computers. 7. Learn about keyboard shortcuts and how to use them.
Indicative Contents المحتويات الإرشادية	Here's a detailed outline of indicative contents for an OOP course. The indicative contents typically cover the following key topics: 1. Computer Basics 1. The development of computer generations 2. Electronic computer 3. Data and information 4. Computer features 5. Areas of computer use 6. Computer components 7. Types of computers 8. Classification of computers 2. Computer components 1. Computer components 2. The physical parts of the computer 3. Input devices 4. Output devices

5. Computer box1. Software entity
6. Number systems
7. Your personal computer
8. Computer platform
9. Factors that must Take this into consideration when purchasing a computer

3.(Computer security and licensing programs)

1. Ethics of the electronic world
2. Forms of abuses in the world Electronic
3. Computer security
4. Computer privacy
5. Computer software licenses
6. Types of licenses
7. Intellectual property
8. Electronic hacking
9. Types of electronic hacking
10. Sources of hacking Electronic
11. The most security risks widespread
12. Malicious software
13. Computer viruses
14. Damages resulting from Viruses
15. Components of viruses
16. Types of viruses
17. Necessary steps for protection From viruses
18. Computer damage On human health

4. Operating Systems

1. Definition of the operating system
2. Operating system functions
3. Objectives of the operating system
4. Operating system classification

	5. Examples of some operating systems 6.Windows 7 operating system 7.Windows 7 installation requirements 8.Windows 7 features 9. Surface components
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1- Explanation, clarification, and honing general and qualifying skills 2- Urging the student to write simple research using the lecture method to create a state of balance between methodological information and source information. 3- Urging the student to work on practical projects on the calculator and hold discussion circles among the students on the methodology of the subject and distribute the students into groups. 4-Practical lessons in the laboratory 5- The method of self-learning and writing scientific reports, and urging the student to evaluate the answers of his fellow students to develop self-development. .

Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	75		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	To be selected by the module leader
	Class group assignments	1	10% (10)	Continuous	
	Report	1	10% (10)	12	
Summative assessment	Midterm Exam	1hr	20% (20)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المناهج الاسبوعي النظري

	Material Covered
Week 1	Chapter One: Computer Basics 1. The development of computer generations 2. Electronic computer 3. Data and information
Week 2	4. Computer features 5. Areas of computer use
Week 3	1. Computer components 2. Types of computers 3. Classification of computers
Week 4	1. Computer components 2. The physical parts of the computer 3. Input devices
Week 5	4. Output devices 5. Computer box
Week 6	1. Software entity 2. Number systems 3. Your personal computer 4. Computer platform 5. Factors that must Take this into consideration when purchasing a computer
Week 7	Mid-term Exam
Week 8	(Computer security and licensing programs) 1. Ethics of the electronic world 2. Forms of abuses in the world Electronic 3. Computer security 4. Computer privacy
Week 9	5. Computer software licenses 6. Types of licenses 7. Intellectual property
Week 10	1. Electronic hacking

	2. Types of electronic hacking 3. Sources of hacking Electronic
Week 11	4. The most security risks widespread 5. Malicious software 6. Computer viruses
Week 12	7. Damages resulting from Viruses 8. Components of viruses 9. Types of viruses
Week 13	10. Necessary steps for protection From viruses 11. Computer damage On human health
Week 14	the fourth chapter Operating Systems 1. Definition of the operating system 2. Operating system functions 3. Objectives of the operating system 4. Operating system classification 5. Examples of some operating systems
Week 15	1.Windows 7 operating system 2.Windows 7 installation requirements 3.Windows 7 features 4. Surface components
Week 16	Final examination

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
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Week 1	Showing the components of the computer to the students and what the parts of the computer consist of in detail
Week 2	Introducing students to the input and output parts and explaining the operation of each device.
Week 3	Opening the computer case, explaining the internal parts and explaining the function of each part
Week 4	Show programming examples inside the lab using one of the programming languages to familiarize students
Week 5	Introducing students to personal computers, explaining their components and parts, how to choose them, and
Week 6	what are the most important factors to consider when purchasing a computer.
Week 7	Mid-term Exam
Week 8	Practical implementation of computer security, privacy protection and computer software licenses and identifying types of licenses, and types of hacking
Week 9	Practical implementation of Introducing students to the sources of hacking, its risks, the most important malware, and examples of it in the form of a presentation. Introducing students practically to computer viruses and the damages resulting from them, what are the types of viruses, and the most important steps necessary to protect against hacking
Week 10	Practical implementation of The harms of computers on human health, introducing students to using computers for prevention and , Introducing students to the operating system, what are the requirements for installing the operating system, and how to install the operating system.
Week 11	Practical implementation of Explain the components of the desktop, the Start menu, and the taskbar.
Week 12	Practical implementation of Folders and files. Explaining the types of files. Introducing the student to the main icons.
Week 13, 14	Practical implementation of Perform operations on windows, how to change the desktop,
Week 15	Practical implementation of To explain the control panel in detail, and to show the control button, and how to install programs
Week 16	Final examination

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the
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		Library?
Required Texts	Written by: 1- Professor Dr. Ghassan Hamid Abdel Majeed 2-Professor Dr. Ziad Muhammad Abboud 3-Professor Dr. Muhammad Nasser Al-Tarfi 4-Professor Dr. Safaa Abbas Al-Mamouri 2- International Information Network, the Internet 1- Internet Ethics - A. M. Alawi Hind - Al-Shabsi Arab University Center 2- Ethics of dealing with technical and communication resources - Dr. Hussein bin Saeed bin Saif 3- Ethics of the virtual world - Dr. Louay Al-Zoubi 2013	yes
Websites	Library Genesis websites: -History of the development of computer networks, objective website: http://mawdoo3.com http://youstaff.blogspot.com: Information and Internet security http://geeklesstech.com : Internet Law Laws for using the Internet- -Real-time communication protocols in the Internet (RTP SIP), World of Technology website. ARPANET logical map, http://russbellew.com/Documents/Arpanet_sep_1974.	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	Domestic Bird	Module Delivery
Module Type	Core	☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical
Module Code	DOBR112	
ECTS Credits	٦	

SWL (hr/sem)	١٥٠		☐ Seminar	
Module Level	1	Semester of Delivery	Two	
Administering Department	Animal Production	College	Agriculture	
Module Leader	Noor falah mahde	e-mail	Noor.falah@uomisan.edu.iq	
Module Leader's Acad. Title		Module Leader's Qualification		
Module Tutor		e-mail		
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	1/10/2024	Version Number	1.0	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Enables the student to gain knowledge of: 1. The importance of the principles of poultry science, which deals in detail with the importance and types of poultry birds, their classification, and their location in the animal kingdom. 2. The nutritional and economic importance of poultry products and their role in preparing animal protein of high biological value. 3. Identify the diets and feed materials for poultry birds. 4. Knowing the most important diseases that affect them and ways to prevent them.
Module Learning Outcomes	1. Introducing students to modern techniques used in poultry production. 2. Introducing students to the types of poultry, their classification, and how to domesticate them?. 3. Explaining and clarifying the sciences related to poultry science. 4. Defining the economic importance of poultry production projects.

مخرجات التعلم للمادة الدراسية	5. Defining the nutritional importance of poultry and its role in providing animal protein. 6. Introducing students to the structure and functions of the various body systems, with a drawing of these systems and an explanation of their parts. 7. Introducing students to genetic improvement of birds and how to increase the quantitative traits responsible for high production of meat and eggs. 8. Introducing students to the importance of the poultry hatching process, the types of hatcheries, and how to complete the hatching process and manage the hatcheries. 9. Introducing students to the factors affecting the hatching process. 10. Explaining and clarifying the design of poultry housing, and how to control environmental conditions inside the housing. 11. Explanation and clarification of the types of feed ingredients used in feeding poultry birds and their nutritional needs. 12. A detailed explanation of broiler slaughterhouses, how they work, the steps followed in preparing the carcasses, and how to preserve them. 13. Introducing students to modern slaughterhouses, slaughtering steps, automatic cutting of carcasses, and preparing the various cuts. 14. A detailed explanation of the most important infectious diseases to which birds may be exposed, and the health programs used to prevent them.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1- Emphasizing the importance of poultry production in the agricultural field and its economic impact on the country. 2- Teaching students about the crucial role of effective management, whether it be the human factor or the breeder themselves, in different types of poultry farms. 3. Promoting the practice of locally raising poultry. 4. Recognizing various poultry types and the key projects associated with their breeding. 5. Identifying administrative challenges in poultry farms and working towards their resolution.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	A) This course aims to develop students' critical thinking skills and analytical abilities about the intellectual framework of the subject of Principles of Domestic Birds. B) This course aims to enable students to examine and analyse various topics related to the breeding of poultry birds, including the different types of birds and the most important projects related to their breeding.

	C) This course aims to help students identify administrative problems that may be encountered in poultry fields and develop strategies to address them. D) This course aims to encourage students to think critically and analyse the successful management role of various stakeholders in poultry fields, such as human workers and educators.
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	٧٢	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	٥
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	١٥٠		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative	Midterm Exam	2hr	10% (10)	7	LO #1 - #7

assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Structure of chicken organs and their vital functions
Week 2	Structure of chicken organs and their vital functions
Week 3	Inheritance in birds
Week 4	Inheritance in birds
Week 5	Hatchery and Hatch Management
Week 6	Exam
Week 7	Principles of Poultry Nutrition
Week 8	Principles of Poultry Nutrition
Week 9	Poultry diseases and parasites
Week 10	Exam
Week 11	Nutritional deficiencies
Week 12	Parasitic diseases
Week 13	Biosecurity – to prevent disease
Week 14	General review of all classes
Week 15	Parasitic diseases
Week 16	

Delivery Plan (Weekly Lab. Syllabus)

Filed (المنهاج الاسبوعي للمختبر (الحقل

	Material Covered
Week 1	Field visit to the poultry field
Week 2	The reality of poultry meat production
Week 3	A. Geographical category
Week 4	Poultry Terminology
Week 5	Types of Hatching
Week 6	Brood Nursery
Week 7	Exam
Week 8	Chicken Anatomy
Week 9	Conditions for poultry houses
Week 10	Poultry Feeding Mineral
Week 11	Examples for calculating broilers and whites
Week 12	Poultry Diseases
Week 13	Exam
Week 14	Slaughterhouse
Week 15	Screening of films about raising mothers and laying hens

Learning and Teaching Resources

مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Principles of Poultry Production written by Dr. Ali Mahmoud Amer Al-Kassar (2010).	No
Recommended Texts	1- Al-Zubaidi, Suhaib Saeed Alwan (1986). Poultry management. Basrah University Press. 2- Poultry production translated by Dr. Musleh Hussein. 3- Al-Fayadh, H. A. A., Naji, S. A. H., & Al-Hajo, N. N.(1989). Poultry Products Technology. First edition,. Higher Education Press, University of Baghdad.	Yes
Websites	https://nicehatchincubators.com/the-principles-of-poultry-husbandry/ https://www.britannica.com/topic/poultry-farming	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية				
Module Title	Plant Protection		Module Delivery	
Module Type	Basic		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	PLPR122			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	1	Semester of Delivery	Two	

Administering Department	Animal Production	College	Agriculture
Module Leader	Qusai Hattab Madhi	e-mail	qusay.hattab@uomisan.edu.iq
Module Leader's Acad. Title	Assistant professor	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	1/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- Learn about the most important pests and diseases spread in Iraq and the world and the types of their causes. - 2- It classifies the types of pests and diseases according to their causes, their cycle of life, or the nature of their reproduction. - 3- The student separates the types of pests and diseases and the most important methods used to reduce their impact on crop productivity - 4- Knows the scientific methods used to reduce the damage of pests and diseases by first adopting preventive methods. - 5- The student evaluates the cost of chemical control, the type of pesticides used, the method of control, additions, and devices.
Module Learning Outcomes	The student should know the basics of plant protection, how to get rid of insect pests, diseases, and fungi that infect plants, and the best ways to protect and protect them.

مخرجات التعلم للمادة الدراسية	
Indicative Contents المحتويات الإرشادية	1- Identify the types of insects 2- Identify the conditions and mutations that help insects in the environment 3- Identify the positive and negative circumstances affecting the life of insects

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Use presentations/images/brochures/books/surveys to research the shop

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introductory Entomology
Week 2	Insect feeding methods and factors that helped to survive
Week 3	A- Methods of insect reproduction
Week 4	B- Environmental factors affecting the life and activity of insects
Week 5	mothproof
Week 6	Economic Governance and Important Factors in Iraq

Week 7	Nature of life and damage of agricultural rodents
Week 8	Economic importance
Week 9	Definitions of Disease Terms
Week 10	Parasitic Plant Pathogens
Week 11	Non-parasitic pathogens
Week 12	Stages of disease development and modes of spread
Week 13	Plant Disease Control Methods
Week 14	Parasitic Plant Pathogens
Week 15	Nature of life and damage of agricultural rodents

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	General characteristics of the arthropod and insect species
Week 2	Insect Body Composition/Head Accessories/Mouth Types/Tentacles Types
Week 3	Chest Accessories/Leg Types/Wings Types/Belly Accessories
Week 4	The formation of insects and the division of insects into ranks
Week 5	Wheat and barley insects + yellow corn + cotton
Week 6	Palm / fruit and cucurbit insects
Week 7	Identify the most important symptoms

Week 8	Study of the symptoms of field crop diseases and methods of resistance
Week 9	Studying the symptoms of horticultural crop diseases and methods of resistance

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1- Principles of plant protection (insects part) 2- Insect pests	Yes
Recommended Texts	Principles of plant protection (plant diseases part)	No
Websites	https://www.agro-lib.site/2022/04/blog-post_497.html	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	Organic Chemistry	Module Delivery
Module Type	Basic	☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☒ Practical
Module Code	ORCH125	
ECTS Credits	6	

SWL (hr/sem)	150	☐ Seminar	
Module Level	UGI	Semester of Delivery	two
Administering Department	Animal Production	College	College of Agriculture
Module Leader	Dr. Yahya Ajib Oudah	e-mail	Yahya.ajjb@uomisan.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	N.A	e-mail	N.A
Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	01/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	The curriculum included a general study of the organic chemistry of some of its formulations, including aliphatic compounds, their preparation methods, their most important reactions and their naming, as well as aromatic compounds and their derivatives and their nomenclature, halogen organic compounds, oxygen organic compounds, nitrogen compounds, and stereochemistry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The organic chemistry curriculum is one of a series of important curricula in the Department of Food Sciences as a guide for students about the most important principles of organic chemistry, explaining the properties of chemicals and how to prepare them and reveal their presence to help know the dangers of these materials to humans and their environment and how to avoid these risks and to know the areas in

	which they can be used this Materials
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Keeping abreast of the amazing developments taking place in various fields and sciences, especially organic chemistry, by clarifying the theoretical foundations and scientific and applied courses of the organic chemistry course through a detailed study of the composition, naming and preparation of chemicals and the chemical reactions explained by their mechanics.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The modern teaching strategy includes achieving learning objectives in general and teaching chemical concepts in particular, and the difficulties that the student faces in understanding and acquiring the concepts of organic chemistry, and treating the difficulties by defining the concepts of organic chemistry and helping students acquire the correct chemical concepts.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	56	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المناهج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to organic chemistry - the most important bonds - hybridization - the possibilities of contributing resonance activities CC - the most important elements in organic chemistry
Week 2	Alkanes - their definition - naming - examples - Sp ³ hybridization - rotational movement - preparation - reactions
Week 3	Alkenes - their definition - nomenclature - examples - Sp ² hybridization - double bond formation - preparation - reactions
Week 4	Hydrocarbon compounds that contain more than one double bond - examples - dienes - their types - their reactions
Week 5	Alkynes - definition - naming - examples - Sp hybridization - triple bond formation - preparation - reactions

Week 6	Aliphatic cyclic compounds - their definition - the most important rings - their preparation - their most important reactions
Week 7	The first theoretical exam
Week 8	Aromatic compounds - their definition - nomenclature - calculation of the electron oscillation energy - formation of the aromatic ring - activity and direction - preparation - reactions
Week 9	Aliphatic and aromatic halides - their definition - nomenclature - examples - their preparation - their reactions SN1, SN2, E1, E2
Week 10	Nucleophilic substitution in aryl halides
Week 11	Alcohols, phenols, and ethers - their definition, nomenclature, preparation, and reactions
Week 12	Aldehydes and ketones - their definition - examples - nomenclature - carbonyl group - preparation - reactions - nitrogen derivatives of aldehyde and ketone
Week 13	The second theoretical exam
Week 14	Amines - their definition - types - nomenclature - examples - preparation - reactions
Week 15	Carboxylic acids - definition - examples - nomenclature - carboxyl group - preparation - reactions
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Physical properties of organic materials
Week 2	Lab 2: Boiling Point Measurement
Week 3	Lab 3: Purification of organic matter and recrystallization
Week 4	Lab 4: solubility of organic compounds
Week 5	Lab 5: Effective totals
Week 6	Lab 6: Detecting the double bond
Week 7	Lab 7: Stereoisomers
Week 8	Lab 8: Detection of alcohols and phenols

Week9	Lab9: NS
Week10	Lab10: Detecting aldehydes and ketones and distinguishing between them
Week11	Lab11: Aspirin preparation
Week12	Lab12: Methane
Week13	Lab13: Physical properties of organic materials

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Organic Chemistry 1988, written by Dr. Raad Ismail Al-Hamdani and Dr. Miqdad Tawfiq Ayoub. University of Mosul	yes
Recommended Texts	Mazahreh, Ayman Mokhtar (2017). Basics of organic chemistry and its applications. Curriculum House for Publishing and Distribution	No
Websites	NO	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Field Crops		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	FICR115		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level		Semester of Delivery	two
Administering Department	Animal production	College	Agriculture
Module Leader	Ali Adnan Hassoun	e-mail	ali.adnan@uomisan.edu.iq

Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	9-2-2024	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	It is related to the subject of plant classification, field crop management, grain and legume crops, and other study subjects such as plant physiology and others.	Semester	
Co-requisites module	It is related to industrial crops, oil and sugar crops, fiber crops, as well as environmental science and soil basics.	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. Knowing the basics of field crop management 2. Definition of field crop science, its economic importance, field crops, the most important divisions of field crops, and the effect of environmental conditions on crop growth. Important agricultural processes in crop production are also defined.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Identify the concept of field crops and how to manage the field. Understand and comprehend the theoretical material and apply it in the practical lesson to prepare students who are able to obtain new job opportunities. 2- Prepare students who have the ability to continue learning and developing inside and outside Iraq. 3- Prepare scientific researchers in the field of field crops who have the ability to provide advice, guidance and modern information in the field of the agricultural sector.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The course includes (2) theoretical hours and (3) practical hours - the number of weekly hours is approved and distributed over 15 weeks. The strategy includes - The ability to work in the agricultural sector in the field crops specialization. - Encouraging students to excel academically to obtain new job opportunities. - Graduating students who have the ability to continue learning and developing inside and outside Iraq. - Preparing scientific researchers in the field of field crops. - Providing advice and up-to-date information to relevant institutions and ministries
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	٥
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	٧
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	١٧٥		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Field crops – definition- origin – development
Week 2	Division of field crops according to economic use and agricultural season, duration of crop stay in the land – other uses
Week 3	Botanical description of the most important families of field crops such as Anjiliya, legumes and others
Week 4	Environmental factors and their relationship to the growth of field crops
Week 5	Vital Factors -Light-Heat-Humidity
Week 6	Soil factors in terms of composition, strength, fertility and interaction of its solution-types of crops have lost their tolerance to salinity
Week 7	The relationship of water to the growth of field crops
Week 8	- Vital factors in microorganisms

Week 9	Preparing the land for agriculture and conducting a quarterly exam
Week 10	Seeds , grains, germination testing, purity and the conditions that must be met in the seeds of field crops prepared for agriculture with an idea of the importance of grading grains, drying the crop, storing it and marketing it
Week 11	The jungles – their definition – the factors of their spread – the losses they cause – ways to combat them , mentioning the most important jungles scattered in the region
Week 12	Agricultural courses – points to be taken into account in the evaluation of agricultural courses – types of courses and their benefits with illustrative examples of agricultural courses
Week 13	Brief Introduction to Field Crop Breeding Methods
Week 14	Stages of production and propagation of improved seeds
Week 15	A brief idea of the most important annual crops in Iraq in the form of focused tables

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	The Concept of Field Crop Science - Field Crop Sections - Scientific Nomenclature
Week 2	Soil Service Operations - 1- Plowing - Benefits of Plowing - Machines Used in the Plowing Process
Week 3	Soil Service Operations 2- Smoothing 3- Leveling 4- Laser Leveling - Advantages of Land Modification
Week 4	Processes - Planting methods - A- Planting method according to the method of placing seeds in the soil (in terms of performance). (b) The method of planting according to the percentage of moisture in the soil when planting. (c) The method of cultivation according to the irrigation system. Advantages and disadvantages of each method
Week 5	Crop Service Operations - Hoe 3- Vaccination - Vaccination - Depth of Planting - Planting Distances

Week 6	Germination of field crop seeds - factors affecting germination - types of germination Calculation of germination ratio
Week 7	Conducting a laboratory experiment - Requirements and how to conduct germination tests - Writing a report

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Mohammad Amin Omid Nouri (1986). Principles of Field Crops. Ministry of Higher Education and Scientific Research. University of Basra. College of Agriculture.	Yes
Recommended Texts	Al-Ansari, Majeed Mohsen and others (1980). Principles of Field Crops. Ministry of Higher Education and Scientific Research. Al-Ansari, Majeed Mohsen (1982). Field Crop Production. Ministry of Higher Education and Scientific Research. College of Agriculture, University of Baghdad	yes
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition

Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Arabic		Module Delivery
Module Type	Core		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code			
ECTS Credits			
SWL (hr/sem)			
Module Level		Semester of Delivery	
Administering Department	Animal Production	College	College of Agriculture
Module Leader	Jihad Naeem Aliwi	e-mail	jehaad.naeem@uomisan.edu.iq
Module Leader's Acad. Title	Assistant Lecturer	Module Leader's Qualification	MS.C
Module Tutor	N.A	e-mail	N.A

Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	/ /2025	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	Introducing students to the basic rules of the Arabic language and enhancing their ability to write correctly, with a focus on training them to prepare scientific research free of linguistic errors.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: Grammar of the Arabic language, Arabic literature, spelling rules, the Holy Quran.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	6 and 13	LO #1, #2 and #8, #9
	Assignments	2	10% (10)	5 and 11	LO #5, #6 and #9, #10
	Projects / Lab.				
	Report	2	10% (10)	11	LO #5, #6 and #7, #8
Summative assessment	Midterm Exam	2hr	20% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	The subject and the predicate
Week 2	The subject and the deputy subject
Week 3	The name of Kahn and her sisters
Week 4	News that and her sisters
Week 5	Literary life in the era of early Islam (features and characteristics)
Week 6	The Farewell Pilgrimage Sermon of the Holy Prophet Muhammad (PBUH)
Week 7	The poem Burdah by Ka'b ibn Zuhayr (his life and critical commentary)
Week 8	Literary life in the Umayyad era
Week 9	Poetry of contradictions

Week 10	Jarir and Al-Farazdaq (his life and critical commentary)
Week 11	The alphabetical, phonetic and alphabetical order of the Arabic letters
Week 12	Solar and lunar letters
Week 13	Writing the marbuta ta' and the simple ta'
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	*	
Recommended Texts		
Websites		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group	A - Excellent	امتياز	90 - 100	Outstanding Performance

(50 - 100)	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
(0 – 49)	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Biochemistry		Module Delivery
Module Type	Basic		☒ Theory
Module Code	CA217		☐ Lecture
ECTS Credits	2		☐ Lab
SWL (hr/sem)	75		☐ Tutorial
			☐ Practical
			☐ Seminar
Module Level	UGx11 1	Semester of Delivery	One

Administering Department	Animal Production	College	Agriculture
Module Leader	Name: Saba Mohammed Jafer	e-mail	sabamohammed@uomisan.edu.iq
Module Leader's Acad. Title	Teacher	Module Leader's Qualification	M.SC.
Module Leader		e-mail	
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	14/9/2025	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	first
Co-requisites module	None	Semester	first

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	● Introduce students to the basics of biochemistry ● Develop students' theoretical and practical skills regarding the cell and carbohydrates in their various parts ● Develop students' skills to differentiate between monosaccharides, disaccharides, and polysaccharides, as well as aldehydes and ketones ● Introduce students to proteins and lipids and their various parts ● Introduce students to nucleic acids and their role in the cell ● Introduce students to hormones and their role in the body ● Introduce students to enzymes and their importance in chemical reactions within the cell .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	أولاً: المعرفة والفهم 1- Identify the chemical composition of essential biological compounds, such as carbohydrates, proteins, lipids, and nucleic acids. 2- Understand the basic principles of metabolism and major metabolic pathways, such as glycolysis, the Krebs cycle, and the electron transport chain. 3- Explain the role of enzymes, their mechanisms of action, and the factors affecting their activity. 4- Understand the relationship between biochemical changes and diseases (such as

	diabetes, gout, phenylketonuria, etc.). 5- Understand the basic principles of acid-base balance and pH regulation in the body. Second: Mental Skills ١- Analyze and interpret the results of biochemical tests. 2-Relate biochemical reactions to physiological functions in the body. 3-Apply biochemical knowledge to solve health problems. 4- Evaluate the effect of certain medications or disease conditions on vital processes. Third: Practical and Professional Skills ١-Conduct basic laboratory experiments in biochemistry. ٢-Use laboratory equipment and solutions accurately and safely. 3- Interpret and document laboratory data scientifically. Fourth: General Skills 1- Work as part of a team in the laboratory. ٢-Communicate effectively in presenting scientific reports. ٣-Use modern knowledge sources to keep pace with developments in the field of biochemistry.
Indicative Contents المحتويات الإرشادية	✓ Course Description: Study of biological compounds (carbohydrates, proteins, lipids, nucleic acids) and their functions, in addition to metabolic processes, enzymes, and acid-base balance. ✓ Course Objectives: Understand the structure and functions of biological molecules. Explain biological reactions in the body. ✓ Relate biochemistry to physiological functions. ✓ Core Course Terms: Biocomponents, enzymes, metabolism of carbohydrates, lipids, and proteins, nucleic acids, acid-base balance. ✓ Teaching and Assessment Methods: Theoretical lectures + practical labs, semester tests, reports, and a final exam.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	١- Presenting the curriculum using images and illustrations that facilitate students' understanding of the material. ٢-Training students to conduct laboratory tests in a way that develops their skills in this area.

	٣-Conducting discussions and dialogues with students, which in turn enhances students' self-confidence .
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Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	٣٢	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	٢
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	١٨	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	٥٠		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المناهج الاسبوعي النظري

	Material Covered
Week 1	Introducing students to the cell and the important parts that make up the cell
Week 2	Introducing students to carbohydrates and their different types
Week 3	Introducing students to the importance of monosaccharides
Week 4	Introducing students to low-sugar polysaccharides
Week 5	Introducing students to polysaccharides
Week 6	Introducing students to amino acids
Week 7	Introducing students to the essential and non-essential amino acid categories.
Week 8	Introducing students to proteins and their importance
Week 9	Introducing students to the structure, composition, and division of proteins.
Week 10	Introduce students to saturated and unsaturated fatty acids and their reactions.
Week 11	Introducing students to simple lipids, their composition and divisions
Week 12	Introducing students to compound and derived sinters
Week 13	Introducing students to the importance of nucleic acids
Week 14	Introducing students to the divisions of nucleic acids and their composition
Week 15	Introducing students to enzymes and the factors affecting them

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Hassan, Ali Mohammed and Shehab, Saad Khalil. Agricultural Biochemistry. University of Baghdad. Iraq. Biochemistry Dr. Sami Al-Muzaffar	Yes
Recommended Texts	Fundamentals of Biochemistry Dr. Jassim Jandal	

Websites	https://www.scribd.com/document/491738379
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Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Microbiology		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code			
ECTS Credits			
SWL (hr/sem)	175		
Module Level	2	Semester of Delivery	
Administering Department	Animal production	College	Agriculture
Module Leader	Msc. Hameed majeed	e-mail	hameed.majeed@uomisan.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Msc. Duaa ali	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	4/10/2026	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Prerequisite module		Semester	
Prerequisite module		Semester	
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Understand the basic concepts of microbiology. 2. Identify major groups of microorganisms. 3. Study the structure and functions of microorganisms. 4. Learn the role of microorganisms in health, disease, and the environment. 5. Develop basic laboratory skills in microbial culture and identification. 6. Understand the applications of microbiology in medicine, agriculture, and industry.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this course, students will be able to: 1. Identify major groups of microorganisms. 2. Describe the structure and functions of microorganisms. 3. Explain the role of microorganisms in health and the environment. 4. Apply basic microbiological laboratory techniques. 5. Recognize common pathogenic microorganisms. 6. Demonstrate safe handling of microbial cultures.
Indicative Contents المحتويات الإرشادية	Indicative Contents (Microbiology) 1. Introduction to Microbiology and its History. 2. Bacteria: Structure and Function. 3. Fungi (Molds and Yeasts). 4. Algae. 5. Viruses. 6. Pathogenic Microorganisms. 7. Water and Wastewater Microbiology. 8. Microbial Culture Preservation. 9. Microbiological Laboratory Techniques. 10. Applications of Microbiology.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Teaching and Learning Strategies		
	• Interactive lectures. Group discussions. • Laboratory practical sessions. • Demonstrations and experiments. • Problem-solving activities. • Student presentations and reports. • Self-directed learning and assignments.		
Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SSWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured USSWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #7, #6
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	continuous	All
	Report	1	10% (10)	13	LO #5, #7 and #8
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All

Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Historical overview of Microbiology and the scientists who contributed to its development
Week 2	Historical overview of Microbiology and the scientists who contributed to its development
Week 3	Bacteria (Morphological characteristics)
Week 4	Bacteria (functional anatomy) (Quizzes)
Week 5	Fungi (Molds)
Week 6	Fungi (Yeasts)
Week 7	Midterm Exam
Week 8	Algae
Week 9	Viruses
Week 10	Pathogenic Microorganisms (Quizzes)
Week 11	Pathogenic Microorganisms
Week 12	Microbiology of Water and Wastewater
Week 13	Microbiology of Water and Wastewater
Week 14	Preservation of microbial cell cultures
Week 15	Final Exam

Delivery Plan (Weekly Practical Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered

Week 1	1. Introduction to Microbiology Laboratory Equipment.
Week 2	2. Preparation of Culture Media..
Week 3	3. Preparation of Culture Media..
Week 4	4. Sterilization.
Week 5	5. Simple Staining.
Week 6	6. Differential Staining (Gram Stain).
Week 7	7. Structural Staining (Spore Stain).
Week 8	8. Isolation of Microorganisms.
Week 9	9. Examination of Bacterial Motility (Hanging Drop Method).
Week 10	10. Enumeration of Microorganisms (Plate Count Method).
Week 11	11. Examination of Molds.
Week 12	12. Water Examination (Suitable for Human Consumption or Not).
Week 13	13. Antibiotic Sensitivity Testing of Bacteria.
Week 14	14. Antibiotic Sensitivity Testing of Bacteria.
Week 15	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1984 علم الاحياء المجهرية المؤلف وفاء جاسم الرجب سنة النشر	yes
Recommended Texts	الاحياء المجهرية التشخيصي الاستاذ الدكتور عبدالنبي جويد المعموري و المدرس المساعد اشراق عبدالامير المعموري	Yes

Websites	Journal of Bacteriology
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Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Principles of dairy science		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	DAIR240		
ECTS Credits			
SWL (hr/sem)	175		
Module Level	2	Semester of Delivery	
Administering Department	Animal production	College	Agriculture
Module Leader	Dr. Sadeq Fenjan Hasnawi	e-mail	sadiq.fanjan@uomisan.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Dr. Asaad shamil atyia	e-mail	Asaad.Shameel@uomisan.edu.iq
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	4/10/2026	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Prerequisite module		Semester	

Prerequisite module		Semester	
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	- Introducing students to the components of milk and the high nutritional value that makes it an important product from a nutritional, health and economic perspective - Developing students' theoretical and practical skills that enable them to detect milk fraud - Developing students' milk manufacturing skills such as making cheese, fermented milk, butter, skimmed milk, yogurt ice cream, etc. - Teaching students how to protect milk from contamination with pathogenic microorganisms
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: - Enabling students to conduct tests on milk components . - Introducing students to the chemical components of milk . - Introducing students to the most important factors affecting milk production . - Introducing students to milk proteins - Introducing students to fats and fatty acids in milk - Introducing students to how to estimate the concentration in milk - Introducing students to how to detect milk adulteration - Introducing students to the most important salts and vitamins found in milk - Introducing students to methods of sorting milk and factors affecting the greenness - Introducing students to milk microbiology - Introducing students to methods of cheese manufacturing - Teaching students to make ice cream - Introducing students to quality control of milk - Introducing students to dairy laboratories - Introducing students to thermal treatments of milk
Indicative Contents المحتويات الإرشادية	- Student contact time refers to the professor-mediated time allocated to teaching, provision of guidance, and feedback to students. - This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where the professor is available for one-to-one discussions and interaction by email. - Student contact time also includes professor-mediated activities that take place in online environments, which may be synchronous (using real-time digital tools such as Zoom or Blackboard Collaborate Ultra) or asynchronous (using digital tools such as tutor-moderated discussion forums or blogs often delivered

through the School's virtual learning environment, Moodle).

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	1- Lectures and tutorials provide background information using pictures and illustrations that facilitate the student's understanding of the material. 2- Training students to conduct laboratory tests on dairy products in a way that develops students' skills in this field. 3- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence.
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا

Structured SSWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured USSWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #7, #6
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	continuous	All
	Report	1	10% (10)	13	LO #5, #7 and #8
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All

Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Milk components
Week 2	Chemical composition of milk
Week 3	Factors affecting milk production
Week 4	Milk proteins
Week 5	Milk fat
Week 6	Milk acidity
Week 7	Specific gravity of milk
Week 8	Milk salts and vitamins
Week 9	Factors affecting milking
Week 10	Milk microorganisms
Week 11	Cheese making
Week 12	Ice cream making
Week 13	Quality control of milk received
Week 14	Milk treatment in dairy factories
Week 15	Heat treatments of milk
Week 16	Milk components

Delivery Plan (Weekly Practical Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Milk components testing
Week 2	Milk chemical composition tests
Week 3	Factors affecting milk production
Week 4	Milk protein tests
Week 5	Microscopic fat tests and fat percentage estimation (Babcock and Kerber)
Week 6	Acidity estimation in milk
Week 7	Specific gravity tests and milk adulteration
Week 8	Milk salts and vitamins
Week 9	Milk sorting and butter making
Week 10	Milk microbiology tests
Week 11	Cheese making
Week 12	Ice cream making
Week 13	Quality control of received milk
Week 14	Milk treatment in dairy factories
Week 15	Milk thermal treatments

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب مبادئ اللبان العامة تأليف د. محسن الشبيبي ودكتور نزار شكري والدكتور صادق جواد طعمة والدكتور هيلان حمادي علي ١٩٩٩	yes

Recommended Texts	مبادئ الالبان العامة جمال عبد التواب مبادئ الالبان رمزي عبد الرحمن كتاب مبادئ اللبان تالف دكتور محسن الشبيبي واخرون	Yes
Websites	https://www.scribd.com/document/491738379	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Fish Culture and Production		Module Delivery
Module Type	Basic		☒ Theory ☐ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code			
ECTS Credits			
SWL (hr/sem)	175		
Module Level	2	Semester of Delivery	
Administering Department	Animal Production	College	College of Agriculture
Module Leader	Mohammed Hato Mohammed	e-mail	Alnaji@uomisan.edu.iq
Module Leader's Acad. Title	Assistant prof.	Module Leader's Qualification	M.S.
Module Tutor	N.A	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	01/10/2024	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. Introduce students to the principles and importance of aquaculture. 2. Study extensive, semi-intensive, and intensive production systems. 3. Understand farm design, construction, and management. 4. Study fish nutrition and feed formulation basics. 5. Understand water quality management in aquaculture systems. 6. Learn artificial breeding and fingerling production techniques. 7. Study fish health management and common diseases. 8. Train students practically on pond management and productivity calculations..
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	By the end of this course, students will be able to: 1. Explain the importance of aquaculture in food security. 2. Differentiate between aquaculture production systems. 3. Design fish farms based on scientific principles. 4. Calculate feeding rates and feed conversion ratio (FCR). 5. Evaluate water quality parameters and their effects. 6. Apply artificial breeding techniques. 7. Identify common fish diseases and management strategies. 8. Assess farm productivity and economic efficiency.
Indicative Contents المحتويات الإرشادية	Indicative Contents • Introduction to fish culture and production and its economic importance. • Aquaculture production systems (extensive, semi-intensive, and intensive). • Design and construction of fish ponds. • Water quality management (dissolved oxygen, pH, temperature, and ammonia). • Fish nutrition and feed manufacturing. • Artificial breeding and fingerling production. • Fish farm management. • Calculation of growth rates and feed conversion ratio (FCR). • Economics of fish production. • Fish health and common diseases.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم	
Strategies	• Theoretical lectures supported with visual aids. • Classroom discussions and interactive dialogue. • Practical and laboratory sessions for sample collection and examination. • Assignments and research reports. • Daily, midterm, and final examinations for assessment of knowledge and application.

Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	66	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation				
تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome

Formative assessment	Quizzes	2	20% (10)	Continuous	All
	Assignments	1	5% (5)	Continuous	All
	Projects / Lab.	2	10%(5)	Continuous	All
	Report	1	5%(5)	Continuous	All
Summative assessment	Midterm Exam	2hr	10% (10)		
	Final Exam	3hr	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	– Introduction to Aquaculture
Week 2	– History and Development of Fish Culture
Week 3	– Production Systems
Week 4	– Pond Design and Construction
Week 5	– Water Quality Management
Week 6	– Fish Nutrition
Week 7	– Feed Formulation
Week 8	– Midterm Exam
Week 9	– Artificial Breeding
Week 10	– Fingerling Productio
Week 11	– Introduction to Aquaculture
Week 12	– Growth and Feed Conversion
Week 13	– Fish Health Management
Week 14	– Economics of Fish Production

Week 15	– Marketing and Post-Harvest Handling
Week 16	

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Fish Culture and Production Najm Qamar Al-Daham (1990). University of Basrah Press.	Yes
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information				
معلومات المادة الدراسية				
Module Title	Principles of Agricultural mechanization		Module Delivery	
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☒ Practical ☐ Seminar	
Module Code	DAIR240			
ECTS Credits				
SWL (hr/sem)	175			
Module Level	2	Semester of Delivery		
Administering Department		Animal production	College	Agriculture
Module Leader	Dr. ALI ABBAS HASHIM		e-mail	ali_abbas@uomisan.edu.iq
Module Leader's Acad. Title			Module Leader's Qualification	
Module Tutor	Dr. ALI ABBAS HASHIM		e-mail	ali_abbas@uomisan.edu.iq
Peer Reviewer Name			e-mail	
Scientific Committee Approval Date		4/10/2026	Version Number	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		Semester	
Prerequisite module		Semester	
Prerequisite module		Semester	
Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents
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أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. To introduce students to the principles of livestock production mechanization and its importance in improving production efficiency and reducing effort and costs. 2. To enable students to identify the types of equipment and machinery used in livestock farms, their functions, and how they operate. 3. To equip students with the ability to select appropriate equipment for feeding, milking, housing, and animal waste management processes, according to the type of project. 4. To develop students' skills in operating and maintaining agricultural equipment used in livestock production, while adhering to occupational safety procedures. 5. To introduce students to modern technologies, automation, and artificial intelligence used in livestock farms and their role in improving productivity. 6. To enable students to evaluate the technical and economic performance of equipment and machinery used in livestock production projects. 7. To develop students' ability to diagnose common malfunctions and develop appropriate solutions to ensure the continued efficient operation of equipment. 8. To prepare students to apply scientific and engineering principles in the design and management of mechanization systems in livestock production projects, thereby achieving sustainability and production efficiency.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Students will learn: 22. This course explains the fundamental concepts of livestock production mechanization and its role in improving the efficiency and productivity of livestock projects. 23. It distinguishes between the types of machinery and equipment used in feeding, milking, housing, feed transport, and animal waste management. 24. It selects appropriate equipment and machinery based on the type of livestock project, production capacity, and economic feasibility. 25. It operates livestock production equipment correctly, adhering to occupational safety and health requirements. 26. It performs basic preventive maintenance on equipment and machinery to ensure operational efficiency and extend their service life. 27. It evaluates the technical and economic performance of machinery and equipment used in livestock production projects using appropriate indicators. 28. It diagnoses common equipment malfunctions and proposes suitable technical solutions. 29. It utilizes modern technologies, such as automation, control systems, and sensors, in the development and management of livestock production projects. 30. It analyzes operational problems in livestock farms and proposes alternatives to improve efficiency and reduce energy and labor consumption. 31. It applies sustainability and environmental conservation principles when using livestock production mechanization equipment and systems.
Indicative Contents	1. Introduction to livestock production mechanization, its importance, applications,

المحتويات الإرشادية	and the development of mechanization technologies in livestock farms. 2. Feeding, milking, and watering equipment and systems, their operating principles, and selection according to the type of livestock project. 3. Housing, ventilation, heating, and cooling systems and their role in improving the internal environment and increasing production efficiency. 4. Animal waste management equipment and machinery maintenance, troubleshooting, and performing preventive and periodic maintenance. 5. Occupational safety and the technical and economic evaluation of equipment and machinery used in livestock production projects. 6. Modern technologies in livestock production mechanization, including automation, control systems, the Internet of Things, artificial intelligence, and their applications in farm management.
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Learning and Teaching Strategies			
استراتيجيات التعلم والتعليم			
Strategies	1. Interactive lectures to explain fundamental concepts.		
	2. Practical and laboratory training on operating and testing equipment.		
	3. Field visits to livestock farms to observe practical applications.		
	4. Problem-based learning and case studies.		
	5. Group discussions and presentations to develop analytical and communication skills.		
	6. E-learning using digital media, educational videos, and simulations.		
Student Workload (SWL)			
الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SSWL (h/sem)	78	Structured SWL (h/w)	
الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured USSWL (h/sem)	97	Unstructured SWL (h/w)	
الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem)	175		
الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #7, #6
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	continuous	All
	Report	1	10% (10)	13	LO #5, #7 and #8
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Electrified fence
Week 2	Psychometric chart
Week 3	Controlling environmental conditions in animal pens
Week 4	Heating in animal pens
Week 5	Control and warning systems used in the ventilation system
Week 6	Providing agricultural buildings with water
Week 7	Milking equipment and systems
Week 8	Refrigeration devices and their uses
Week 9	Wool shearing equipment

Week 10	Components of the electric wool shearing machine
Week 11	Waste disposal equipment
Week 12	Equipment, devices and means used in moving waste
Week 13	Hatcheries and egg packing equipment
Week 14	Treating eggs before placing them in hatcheries Animal
Week 15	slaughtering and meat processing equipment

Delivery Plan (Weekly Practical Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Control Unit Installation
Week 2	Exercises to solve problems related to the psychometric diagram and how to find it
Week 3	Barn Air Characteristics
Week 4	Natural and Forced Ventilation
Week 5	Complete Heating Battery
Week 6	Methods of Cooling Animal Barns
Week 7	Water Tanks and Their Control Systems
Week 8	Field Visit to Cattle and Sheep Barns
Week 9	Milking Machine Components
Week 10	Preserving Beef and Sheep Meat
Week 11	Explanation of Fertilizing Equipment and How It Works
Week 12	Identifying Types of Scrapers
Week 13	Field Visit to Cattle, Sheep, and Poultry Barns and Identifying Types of Waterers
Week 14	Field Visit to Hatcheries and Egg Incubators

Week 15	General Explanation of the Possibility of Establishing an Animal Production Project
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Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	معدات ميكنة إنتاج الثروة الحيوانية. بقلم الدكتور لطفي حسين محمد علي، الأستاذ المساعد في الميكنة الزراعية، والدكتور توفيق فهمي داميان، الأستاذ المشارك في الهندسة الزراعية.	yes
Recommended Texts		Yes
Websites		

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية		
Module Title	Principles of Genetics	Module Delivery
Module Type	Basic	☒ Theory ☐ Lecture ☒ Lab ☒ Tutorial ☒ Practical ☐ Seminar
Module Code	٢٣٥GENE	
ECTS Credits	7	
SWL (hr/sem)	175	

Module Level	UGI	Semester of Delivery	One
Administering Department	Animal Production	College	College of Agriculture
Module Leader	M.M Duaa ALI M.M Hamid Majeed	e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	.M.M
Module Tutor	N.A	e-mail	N.A
Peer Reviewer Name	N.A	e-mail	N.A
Scientific Committee Approval Date	01/10/202٦	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	- Help students understand the curriculum and vocabulary of the lesson Animal genetics curriculum and learn about the history of genetics - Introduce livestock projects and focus on the genetic aspects in the country studying farm animal breedThe possibility of preserving them and enhancing their economic characteristics
Module Learning Outcomes	Graduating students who are able to Work in the field of genetic characterization of farm animals

مخرجات التعلم للمادة الدراسية	Practical practice of the most important animal genetics projects and conduct test crosses for a number of farm animals
Indicative Contents المحتويات الإرشادية	Introduction, principles and basics of genetics science , introduction and application on related heredity and multiple alleles, study of some -Mendel laws, examples of sex genetics diseases and mutation in animals and human

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	This course is designed to suit the second year students in the Animal Production Department. In order to achieve the desired goal of studying this course, genetics studies the biodiversity in farm animals and the effect of genetic factors on different animals and studies how similar and different animal species are in terms of phenotypic and genetic characteristics

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	66	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	2	10% (10)	Continuous	All
	Report	2	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction about genetics sciences and relationships with other sciences
Week 2	(Nucleic acid (Replication and Synthesis
Week 3	Mendelian laws
Week 4	Dominance relation and multiple alleles/ Dominance and statistical testing
Week 5	Environmental effects and gene expression
Week 6	sex determination and sex linkage/ maternal effect and cytoplasmic inheritance
Week 7	Linkage and recombination and Gene mapping
Week 8	Chromosome variation in number

Week 9	change in chromosome structure
Week 10	Mutations
Week 11	Gentic control of proteins
Week 12	Gentic code
Week 13	Gene frequencies
Week 14	Change in gene frequencies
Week 15	Inbreeding and heterosis
Week 16	

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Introduction about cells and chromosomes
Week 2	Mitosis and Meiosis
Week 3	Live cycle of drosophella fly
Week 4	First and second of Mendel lawes
Week 5	changes on mendel lawes Multiple alleles and the
Week 6	Relationship with six
Week 7	Genetic immunity

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	عدنان حسن محمد (١٩٨٢ -) أساسيات في الوراثة . دار الكتب للطباعة والنشر . الموصل. خالد حامد حسن (٢٠١٧) أساسيات علم الوراثة . مطبعة جامعة ديالى . جمهورية العراق.	Yes
Recommended Texts	المجلات العلمية الاكاديمية العراقية J. of Heredity	
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Course Description Form

1- Course Name
Animal Physiology
2-CourseCode
ANPH318
3-semester/ year
2023 – 2024 (Spring Semester)
4-The date of preparing this description
01/07/2024
5. Forms of Attendance: Compact
In-Person
6. Number of study hours (total) / number of units (total)
75 hours) (2 theoretical + 3 practical) * 15 weeks(/ 3.5 units
7. Name of the course administrator (if more than one name is mentioned)

Name: Eng. Faisal Ghazi Lazem		Email: f.bio1987@gmail.com			
8. Course Objectives					
Course Objectives		To know the physiology of the animal in general , and to know the structure and functions of the animal's body through the study of the organs and organs of the body			
TEACHING AND LEARNING STRATEGIES					
Strategy	1- Presentation of courses using pictures and illustrations 2- Conducting practical lectures in laboratories and training students to conduct laboratory tests 3- Conducting discussions and dialogues within the lecture				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2 Theor etical & 3 Practi cal	Introduction to Zoophysiology, Related Sciences, Historical Digest	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Level 2	2 Theor etical & 3 Practi cal	Cell Physiology, Definitions About the Cell , Cell Membrane Structure, Cell Membrane Movement, and Related	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
third	2 Theor etical & 3 Practi cal	the function of the cell membrane, ways of moving through the cell membrane,	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams

Fourth	2 Theoretical & 3 Practical	Circulatory system, cardiovascular , cardiac cavities and valves	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Fifth	2 Theoretical & 3 Practical	Electrical conduction of the heart muscle, control of the work of the heart , blood pressure and control , factors regulating the work of the heart ,and related matters	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Six	2 Theoretical & 3 Practical	Breathing Apparatus, Mechanical Breathing Apparatus Installation	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Seven	2 Theoretical & 3 Practical	Controlling the respiratory process, factors controlling the rate of ventilation , the main functions of the respiratory system	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Eighth	2 Theoretical & 3 Practical	The nervous system , sections of the nervous system , how the nervous system works, types of axons	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams

Nine	2 Theoretical & 3 Practical	Neurological impulse, neurotransmitters , neuromuscular attachment, neuromuscular reflex, neurobiological activities controlled by the nervous system	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
10th Grade	2 Theoretical & 3 Practical	The endocrine system, endocrinology , hormones, their structure and concentrations in the body	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
11th Grade	2 Theoretical & 3 Practical	General functions of hormones , regulation of hormone secretion, methods of measuring it, glands	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
12th Grade	2 Theoretical & 3 Practical	urophysiology, urosynthesis, renal unit,	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Thirteenth	2 Theoretical & 3 Practical	urinary tract , neurohormonal regulation of the work of the kidneys ,	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams

Fourteenth	2 Theoretical & 3 Practical	metabolism and energy release, protein metabolism,	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Fifteenth	2 Theoretical & 3 Practical	Carbohydrate metabolism, lipid metabolism, water metabolism, minerals , vitamins	Physiology of Animals	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and Monthly Exams
Course Evaluation					
The final grade shall be from (100) and the grade shall be distributed according to " the daily attendance and the daily, monthly and final examinations.					
learning and teaching resources;					
Required textbooks (methodology if any)			1. Shtiwi Al-Abdullah : Physiology, 1st Edition (Amman , Dar Al-Masirah Publishing and Distribution , 2012). 2. Sabakh Nasser Al-Aluji: Physiology , (Amman , Dar Al-Fikr Publishers and Distributors , 2014).		

Course Description Form

1- Course Name
Hatching and hatch management
2-CourseCode
HAHM322
3- Semester / Year /Autumn Semester - First Course
4-The date of preparing this description

5. Forms of Attendance: Compact					
6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours (2 theoretical + 3 practical) *15 weeks					
7. Name of the course administrator (if more than one name is mentioned)					
Name: Eng. Rasha Naji Abd			Email rashanaji@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			• Identify hatching and its types . • Knowing the stages of embryonic development of egg chicks • Knowledge of hatching machines. • Hatching rectifiers. • Influencing Factor Study • Hatch design and the most important problems of hatching.		
TEACHING AND LEARNING STRATEGIES					
Strategy		Existing strategy Audio methods (Tutorial explanation of the topic)			
		Writing style on the board			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2 Theoretical 3 Practical	Nafqis and its hatcheries	Study of the female reproductive system	Theory/ practicals	Exams + Cosats
Level 2	2 Theoretical 3 Practical	Hatching and hatch management	Male reproductive system:	Theory/ practicals	Exams + Cosats
third	2 Theoretical	Hatching and hatch management	Emptying eggs (factors affecting the emptying eggs	Theory/ practicals	

	3 Practical		before they are laid by the chicken)		
Fourth	2 Theoretical 3 Practical	Hatching and hatch management	Treat eggs before hatching.	Theory/ practicals	Exams + Cosats
Fifth	2 Theoretical 3 Practical	Nafqis and management of hatcheries	Conditions to be met in hatching eggs	Theory/ practicals	Exams + Cosats
Six	2 Theoretical 3 Practical	Hatching and hatch management	Store hatching eggs.	Theory/ practicals	Exams + Cosats
Seven	2 Theoretical 3 Practical	Nafqis and management of hatcheries	Monthly Exam	Theory/ practicals	Exams + Cosats
Eighth	2 Theoretical 3 Practical	Nafqis and management of hatcheries	Hatching rectifiers	Theory/ practicals	Exams + Cosats
Nine	2 Theoretical 3 Practical	Hatching and hatch management	Preparing eggs for hatching and stages of embryonic development	Theory/ practicals	Exams + Cosats
10th Grade	2 Theoretical 3 Practical	Hatching and hatch management	Sources of hatching eggs and care for mothers' herds	Theory/ practicals	Exams + Cosats
11th Grade	2 Theoretical 3 Practical	Hatching and hatch management	Identifying and evaluating the quality of hatched chicks	Theory/ practicals	Exams + Cosats
12th Grade	2 Theoretical	Hatching and hatch management	Hatching Plan	Theory/ practicals	Exams + Cosats

	3 Practical				
Thirteenth	2 Theoretical 3 Practical	Hatching and hatch management	healthcare	Theory/ practicals	Exams + Cosats
Fourteenth	2 Theoretical 3 Practical	Hatching Hatch Management	Detection of hatching problems	Theory/ practicals	Exams + Cosats
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			The Book of Nafqis and the Management of Hatches Al-Jajji ,Reda Jawad and Ismail Khalil Ibrahim 1981		
Key References (Sources)			From methodological books, auxiliary books, the Internet and scientific research.		
Recommended books and references (scientific journals, reports...)			Scientific journals in basic disciplines		
Electronic references, websites ,.....					

Course Description Form

1- Course Name
Animal Nutrition
2-CourseCode
ANNU314
3-semester/ year
2023 – 2024 (Fall Semester)
4-The date of preparing this description
25 April 2024
Available attendance forms
6. Number of study hours (total) / number of units (total)
75 hours (2 theoretical + 3 practical) *15 weeks
Name of course administrator (if more than one name is mentioned)

Name: Eng. Ali Jassim Mohammed					
Course Objectives					
Objectives of the unit		Preparing graduates who are able to know : 1- How to digest, absorb and metabolize nutritional nutrients. 2- Field work skills, and how to establish and prepare animal breeding projects. 3- Types of animal feed such as molasses and silage... 5- The work of the digestive system in the animal . 5- Applying for external tests by local / regional / international bodies.			
TEACHING AND LEARNING STRATEGIES					
Strategy		1- Enabling students to analyze and think about topics related to the intellectual framework of animal nutrition 2- Enabling students to analyze to identify the digestive system in simple and ruminant animals. 3- Enabling students to identify the main nutrients. 4- Enabling students to identify the structure of the body of animals and plants .			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introducing students to the components of the animal and plant body and knowledge of the main nutrients.	Food /Animal Body Composition/Plant Composition/Water Role and Needs in Animal Body/Water Properties and Functions/ Energy .	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
2	5	Enabling students to know the digestive system and its work in ruminants	Digestive processes in animals / digestive system /pseudo-ruminants / types of digestion / enzymes / qualities of enzymes /microbial digestion of carbohydrates /	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
3	5	Introducing students to the components of saliva, its work and its importance in ruminants	Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
4	5	Introducing students to the components of saliva, its work and its importance in ruminants	Saliva Production/Saliva Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
5	5	Enabling students to know proteins, their	Second:Proteins/		Daily and monthly

		properties, classification, enzymatic and microbial digestion and metabolism	Classification of proteins/Amino acids/Properties of proteins /Metabolism of proteins in rumen/Enzymatic digestion of proteins/Third : Lipids Classification of lipids /Fat properties/ Digestion of lipids in rumen		reports .
6	5		exam	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
7	5	Introducing students to inorganic elements and their importance in the life of the organism . As well as enabling students to know the animal's energy needs	Fourth: Inorganic elements/Essential or necessary inorganic elements/Fifth: Vitamins /Nutritional needs of various nutrients/First : Energy needs/Energy processing in the animal's body/ Total digested nutrients	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
8	5	Enabling students to know the animal's protein needs	Second: Protein Needs/Crude Protein/Real Protein/Biological Value/	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
9	5	Enabling students to know the types and numbers of microorganisms in the rumen of ruminants	Microbiology in rumen / classification of bacteria/ nutrients needed by bacteria/cilia of rumen/other microorganisms	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
10	5	Introducing students to concentrated and coarse feed used in animal nutrition	Feed and Feedstuffs/ First: Concentrated Feedstuffs/ Second :Coarse Feedstuffs		Daily and monthly reports .
11	5	Enabling students to manufacture and mix meals . as well as methods of preserving	/ Type I: Green Coarse Feedstuffs / Type II :Silage/ Type III -Dry Coarse Feedstuffs /	1- Theoretical lectures. 2- Practical	Daily and monthly reports .

		fodder		lectures. Displays Dialogue and Discussion	
12	5		exam	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
13	5	Introducing students to food additives, their types and their importance in terms of health and economic	Third: Food additives/ factors affecting the nutritional value of feedstuffs/nutritional problems related to the digestive tract of ruminants / bloating /acute indigestion/	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
14	5	Introducing students to the most important diseases that affect ruminants resulting from malnutrition .	Simple indigestion/rumen acidity/milk fever/urea poisoning/ ketosis/rumen glut	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
15	5	Enabling students to know the types of pastures and how to exploit them	Rangelands/Rangelands Types/Natural Rangeland Exploitation/ Overgrazing/Organized Grazing/Grazing Problems	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .

Course Evaluation

Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports

Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. Feeding an animal . Translated by Saad Abdel Hussein Naji and Talal Youssef Boutros . Technical Institutes Foundation. 1985 2. Dietetics Written by Shaker Abdul Amir Al-Attar and Dr. Gamal Abdel Rahman Tawfiq 2014 . Faculty of Agriculture, University of Baghdad.
Main References (Sources)	1 animal-nutrition-7th-edition.pdf (wordpress.com) 2- Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the library .
Recommended books and references (scientific journals, reports...)	animal-nutrition-7th-edition.pdf (wordpress.com)
E-References, Websites	Agriculture Free Full-Text Animal Nutrition and Productions (mdpi.com)

Course Description Form

1- Course Name/ Economics of Animal Production
2-CourseCode
ECAP321
3- Term / Year / Term 1 – 2023 - 2024

4-The date of preparing this description					
5. Forms of Attendance: Compact					
6. Number of study hours (total) / number of units (total)					
7- Name of the course officer (if more than one name is mentioned) /Dr. Alaa Kazem Farhan					
Name: Dr. Alaa Kazem Farhan			Email: alaa.k.f@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			• .Introducing students to the importance of livestock economics. • Informing the student that the global crisis in the issue of food shortages of grains and meat will worsen in the coming years. • Introducing students to the agricultural economic problem. • Introducing students to the economics of livestock production and agricultural resources. • Introducing students to the returns of production elements. • Definition of the productivity function and the first principles of selection. • Introducing students to what production costs are. • Introducing students to the importance of agricultural planning and its most important objectives.		
TEACHING AND LEARNING STRATEGIES					
Strategy		Learning is done by classroom lectures.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First Divorce	2	Key Production Principles	Agronomy	Classroom lecture	Questions during the lecture
Level 2	2	Agricultural economic problem and its causes	Economic Problem Causes:	Classroom lecture	Questions during the lecture
third	2	Production Economics	Definition of production Production Economics	Classroom lecture	Questions during the lecture
Fourth	2	Production Economics	Agricultural productivity Prices of elements of production	Classroom lecture	Questions during the lecture
Fifth	2	Productive function	Relationships between resources and livestock production	Classroom lecture	Questions during the lecture
Six	2	Productive function	Economic derivatives of the livestock production function	Classroom lecture	Questions during the lecture
Seven	2	Month 1	-----	-----	-----
Eighth	2	Stages of production and the principle of the law of diminishing returns	The Principle of Diminishing Yield and Rational and Irrational Production	Classroom lecture	Questions during the lecture
Nine	2	Productive Function and Replacement Relationships	Basic derivatives if more than one production	Classroom lecture	Questions during the lecture

			element is used		
10th Grade	2	Production costs of livestock production projects	Nature of costs Cost functions	Classroom lecture	Questions during the lecture
11th Grade	2	Production costs of livestock production projects	Relationships between Long- and Short-Term Costs	Classroom lecture	Questions during the lecture
12th Grade	2	Categories of adopters of the new technologies	Types of Adopters	Classroom lecture	Questions during the lecture
Thirteenth	2	Basic methods of livestock production planning	Definition of agricultural planning and its most important objectives	Classroom lecture	Questions during the lecture
Fourteenth	2	Basic methods of livestock production planning	Obstacles to Farm Planning	Classroom lecture	Questions during the lecture
Fifteenth	2	Second month	_____		
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.) 1- First month exam of 20 marks 2- Second month exam of 20 marks 3- Make surprise daily exams with 3 grades 4- Report on Article 3 marks 5- Extracurricular activities 4 degrees 6- Final exam of 50 marks					
learning and teaching resources;					
Required textbooks (methodology if any)					
Key References (Sources)					
Recommended books and references (scientific journals, reports...)			- Economics of Animal Production_d. Salem Tawfiq Al-Najafi - Faculty of Agriculture – University of Mosul. - Principles of Animal Production-D. Mohammed Ali Makki -Faculty of		

	Agriculture – Wasit University.
Electronic references, websites ,.....	

Course Description Form

1. Course Name: Ecology and animal behavior
2. Course Code:
3. Semester / Year: Fall semester 2024
4. Description Preparation Date:
5. Forms of Attendance: Compact
6. Number of Studying Hours (Total) / Number of Units (Total) 30 hours (2 theoretical)*15 weeks

7. Course Administrator's Name (mention all, if more than one name)					
Name: noor falah mahde			Email:		
8. Course Objectives					
Course Objectives		- Introducing the student to the concept of the environment and its relationship with animals, and studying the natural behavior of the animal, which brings it comfort and well-being, which is ultimately reflected in its productive performance. - Study the sections of environmental science and their definitions - Study of environmental factors and their impact on animals and the administrative aspect of fields - Study of animal behavior at various stages of its life - Studying the natural behavior of the animal, which brings it comfort and well-being, which is ultimately reflected in its productive performance			
9. Teaching and Learning Strategies					
Strategies		Explanation and clarification The lecture method Writing scientific reports Scientific trips			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Definitions of ecology and its sections	Ecology and animal behavior	Explanation presentation of the model and lecture	the exam
2	2	Laws of distribution of animals on Earth	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
3	2	Environmental factors and their impact on animals	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
4	2	Sources of heat in the animal's body and factors affecting it	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
5	2	Heat, humidity and their effect on animals	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
6	2	Thermal balance	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam

7	2	Convection, radiation, conduction and evaporation	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
8	2	Camels and the desert environment	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
9	2	The role of the hypothalamus and pituitary gland	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
10	2	Sweating and body temperature regulating factors	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
11	2	The concept of animal behavior and its impact on production	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
12	2	Behavior of cattle before, during and after calving	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
13	2	Food intake, rumination and water drinking behavior of the animal	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
14	2	Lactation behavior, bull behavior	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam
15	2	Behavior of sheep and goats	Ecology and animal behavior	Explanation, presentation of the model and lecture	the exam

11. Course Evaluation

Distribution of the grade out of 50 according to the tasks assigned to the student, such as homework, daily, oral, monthly, written exams, reports, etc.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Agricultural animal environment Dr. Akram Thanoun and Animal Behavior / Talal Youssef Boutros and Dr. Diaa Khalil Ibrahim
Recommended books and references (scientific journals, reports...)	Iraqi academic scientific journals Journal of Agricultural Sciences/University of Basra
Electronic References, Websites	Animal Science Journal- Journal of Animal Behavior Science

Course Description Form

1. Course Name: Design and Analysis of Experiments
2. Course Code:
3. Semester / Year: Semester-based – First Course
4. Description Preparation Date: 20/9/2023
5. Forms of Attendance: Weekly
6. Number of Studying Hours (Total) / Number of Units (Total) 75 hours

7. Course Administrator's Name (mention all, if more than one name)					
Name: Ali Adnan Hassoni			Email: ali.adnan@uomisan.edu.iq		
8. Course Objectives					
Course Objectives		Educate students on the fundamental principles of designing and analyzing experiments, emphasizing the importance of this subject in reinforcing the practical aspect of conducting scientific research. Students will learn about the main concepts of design such as experiments, experimental units, factors, treatments, replications, and experimental error, and how to choose the appropriate design for agricultural experiments to reach correct conclusions and decisions			
9. Teaching and Learning Strategies					
Strategies		The strategy is implemented through lectures, discussions, solving scientific and practical examples, daily and monthly exams, assignments, and brainstorming sessions.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory, 3 Practical	Design of Completely Randomized Block Design (R.B.C.D)	Design and Analysis of Experiments	Lectures and Discussions	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
2	2 Theory, 3 Practical	Significant differences according to the Least Significant	Design and Analysis of Experiments	Lectures and Discussions	
3	2 Theory, 3 Practical	Estimation of missing data in R.B.C.D design	Design and Analysis of Experiments	Lectures and Discussions	
4	2 Theory, 3 Practical	R.B.C.D design with more than one observation	Design and Analysis of Experiments	Lectures and Discussions	
5	2 Theory, 3 Practical	Latin Square Design (L.S.D)	Design and Analysis of Experiments	Lectures and Discussions	
6	2 Theory, 3 Practical	Dunnett's Comparison Test	Design and Analysis of Experiments	Lectures and Discussions	
7	2 Theory, 3 Practical	Monthly Exam	Design and Analysis of Experiments	Lectures and Discussions	
8	2 Theory, 3 Practical	Types of complex experiments and how to distinguish between	Design and Analysis of Experiments	Lectures and Discussions	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
9	2 Theory, 3 Practical	Factorial experiments with two factors in C.R.D design	Design and Analysis of Experiments	Lectures and Discussions	
10	2 Theory, 3 Practical	Factorial experiments in R.B.C.D design	Design and Analysis of Experiments	Lectures and Discussions	
11	2 Theory, 3 Practical	Factorial experiments in Latin Square Design	Design and Analysis of Experiments	Lectures and Discussions	

	Practical				
12	2 Theory, 3 Practical	Monthly Exam	Design and Analysis of Experiments	Lectures and Discussions	
13	2 Theory, 3 Practical	Split-plot experiments with two factors in C.R.D design	Design and Analysis of Experiments	Lectures and Discussions	
11. Course Evaluation					
Distribution of the grade out of 50 according to the tasks assigned to the student, such as homework, daily, oral, monthly, written exams, reports, etc.					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)			"Design and Analysis of Agricultural Experiments" by Dr. Khasha Mahmoud Al-Rawi.		
Main references (sources)			From textbooks, supplementary books, the internet, and scientific research		
Recommended books and references (scientific journals, reports...)			"Design and Analysis of Agricultural Experiments"		
Electronic References, Websites					

Course Description Form

1. Course Name:
Medical and Veterinary Insects
2-CourseCode
MEVI318
3- Semester / Year: First Semester 2023-2024
4-The date of preparation of this description: the beginning of the first course

5. Forms of Attendance: Compact					
6. Number of study hours (total) / number of units (total)					
7- Name of the course officer (if more than one name is mentioned): Dr. Ahmed Malik Juma					
Name:Dr. Ahmed Malek Juma			Email: mr.ahmad@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			• Introduction to Medical and Veterinary Insects • Identify insects and know their harms		
TEACHING AND LEARNING STRATEGIES					
Strategy		Using modern means of delivering information to students and using fieldwork to learn more about the methodology of the course, which is part of modern education so that full information about the course is available after the student's graduation			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2		Introduction to Medical and Veterinary Insects		
Level 2	2		Date		
third	2		Medical and veterinary entomology		
Fourth	2		Reproduction in nematodes		
Fifth	2		Characteristics of Insect Ranks and Families		
Six	2		Arthropods and their characteristics		
Seven	2		Sorbent insects		
Eighth	2		Piercing Sorbent Insects		

Nine	2		Biting insects		
10th Grade	2		Domestic flies		
11th Grade	2		Sucking lice		
12th Grade	2		Fleas,		
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)					
Key References (Sources)			Medical and veterinary entomology		
Recommended books and references (scientific journals, reports...)			Entomology Magazine		
Electronic references, websites ,.....			R		

Course Description Form

1. Course Name:	
Poultry (n.)	
2-CourseCode	
POPH316	
3- Semester / Year: Spring Semester 2	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6- Number of study hours (total) / number of units (total): 75 hours (2 theoretical + 3practical) * 15 weeks	
7. Name of the course administrator (if more than one name is mentioned)	
Name: M. Zainab Zaidan Khalaf Lec. Hamid Majeed	

8. Course Objectives	
Course Objectives	- The student learned about the body functions of different poultry birds. - We introduce the student to the basis of the work of the devices with a simple detail of the anatomy of the body systems. - Identify how the body's systems work and what are the effects on the basis of their work.
TEACHING AND LEARNING STRATEGIES	
Strategy	1-Explanation and clarification 2- Method of in-person lecture Student Groups -2 4-Practical lessons in the field 5- Method of self-learning and writing scientific reports

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2	Body fluids and blood in birds	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Level 2	2	Heart, Circulation and Neurological Control	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
third	2	Bird Nervous System (CNS)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Fourth	2	Bird nervous system (peripheral nervous system)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Fifth	2	Bird respiratory system (components, gas exchange mechanism)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Six	2	Urinary system of birds(components, functions, renal filtration)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Seven	2	Urinary system of birds(saline glands and factors affecting their secretions,urine, its properties and nitrogen content)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Eighth	2	Thermal regulation	Poultry	Explanation,	Exam

			(n.)	Model Presentation and Lecture	
Nine	2	Gastrointestinal(mouth,pharynx,esophagus, cyst, glandular stomach, muscular stomach,small intestine,cecum,rectum,complex)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
10th Grade	2	Gastrointestinal(subsequent glands of the gastrointestinal tract, neurocontrolled regulation of food intake)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
11th Grade	2	Gastrointestinal (secretion, digestion, absorption, rapid passage of food through the gastrointestinal tract)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
12th Grade	2	Endocrine System.....	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Thirteenth	2	Reproduction in male birds(sexual organs, spermatogenesis)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Fourteenth	2	Reproduction in birds(artificial insemination, factors affecting fertility, male sex hormones)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam
Fifteenth	2	Reproduction in female birds(components and functions of the female reproductive system, female sex glands)	Poultry (n.)	Explanation, Model Presentation and Lecture	Exam

Course Evaluation	
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)	
learning and teaching resources;	
Required textbooks (methodology if any)	Physiology of Poultry Birds/ Written by Prof. Dr. Diao Hassan Al-Hassani
Key References (Sources)	The Book of Endocrine Physiology and Reproduction in Mammals and Birds : Authored by Dr. Khairuddin Mohiuddin and Dr. Walid Hamid Youssef, Dr. Saad Hussein Touthleh
Recommended books and references (scientific journals, reports...)	Lectures and books published by Iraqi universities
Electronic references, websites ,.....	Teaching students how to use the Internet, search for armed means and develop understanding of the curriculum vocabulary

Course Description Form

1. Course Name:

Poultry Products Technology					
2-CourseCode					
PPTE315					
3- Semester / Year: Semester 2/Spring Course					
4-The date of preparing this description					
5. Forms of Attendance: Compact					
6- Number of study hours (total) / number of units (total): 75 hours (2 theoretical + 3practical) *15 hours					
7. Name of the course administrator (if more than one name is mentioned)					
Name: Zainab Zaidan Khalaf Hassanin Najm				Email:	
8. Course Objectives					
Course Objectives			• The student should know about poultry products. • Identify how eggs, poultry meat and biofuels are produced from poultry waste. • Identify the chemical composition and nutritional value of poultry products • Identify factors affecting poultry products • Learn how to market poultry products and deliver them to the consumer • Learn how to maintain and store poultry products.		
TEACHING AND LEARNING STRATEGIES					
Strategy		1. Explanation and clarification Lecture method Student Groups -2 4- Practical lessons in the field 5- Scientific trips to follow up poultry projects in Iraq			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2	The reality of poultry production in Iraq and the Arab world, the importance of expanding poultry production, the reality of egg production, and the reality of poultry meat production)	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Level 2	2	Types of poultry	Technology of	Explanation,	Exam

		projects, measuring the specific weight of the egg	poultry products	Model Presentation and Lecture	
third	2	The nutritional value of eggs, egg composition, eggs in human nutrition, factors affecting the nutritional value of eggs, egg contents of calcrol, measuring the percentage of the weight of the shell	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Fourth	2	Egg chemistry and products, shell and egg membranes, egg whites, egg yolks, shell color	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Fifth	2	Egg microbiology, egg contamination before and after delivery, the ability of the egg to resist microorganisms, changes caused by the microorganism of the egg, factors affecting the shell	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Six	2	Egg storage and marketing, changes in eggs when storing, methods of preserving and storing eggs, marketing liquid eggs, white height scale	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Seven	2	Production of poultry meat, preparation of meat broilers, receipt of broilers and brooders, commercial breeds of chicken broilers, standard rates of economic qualities of meat broilers and the factors affecting them, the scale of the egg guide	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Eighth	2	Chemical and nutritional properties of poultry meat, poultry meat composition, factors affecting the chemical	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam

		composition of poultry meat, unit scale is			
Nine	2	Processes for preparing poultry meat for consumption, types of poultry birds used in meat production, processes for preparing poultry meat, cutting poultry carcasses, quality of yolks	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
10th Grade	2	Quality of poultry meat and methods of preservation, grading of live poultry and qualities adopted in grading, grading of carcasses, preservation of quality, shape of yolk	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
11th Grade	2	Cold storage, refrigeration requirements, meat freezing, freezing requirements in poultry slaughterhouses, methods used to freeze poultry meat, changes in the nutritional value of poultry meat during storage, yolk color and factors affecting it	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
12th Grade	2	Microbiology of poultry meat, methods of measuring yolk color	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Thirteenth	2	Flavor and softness of poultry meat	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Fourteenth	2	Blood and flesh spots	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Fifteenth	2	The effect of cooking methods on the flavor and softness of poultry meat and its nutritional values , egg grading and examination	Technology of poultry products	Explanation, Model Presentation and Lecture	Exam
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily					

preparation, daily, oral, monthly and written examinations and reports etc.)	
learning and teaching resources;	
Required textbooks (methodology if any)	Technology Book of Poultry Birds/ A book composed of two parts by Hamdi Al-Fayyad, Saad Abdul Hussein and Nadia Al-Hajo
Key References (Sources)	Methodological book specified by the Ministry
Recommended books and references (scientific journals, reports...)	Lectures published by Iraqi universities
Electronic references, websites ,.....	Kenana Olayne, Poultry hup, Poultry site

Course Description Form

1- Course Name
Fodder and Feedstuffs
2-CourseCode

FERA321	
3-semester/ year	
2023 – 2024 (Spring Semester)	
4-The date of preparing this description	
01.04.2024	
5. Forms of Attendance: Compact	
In-Person	
6. Number of study hours (total) / number of units (total)	
75 hours (2 theoretical + 3 practical) *15 weeks	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Eng. Ali Jassim Mohammed	
Name : Eng. Dounia Mohi Mohsen	
8. Course Objectives	
Course Objectives	Preparing graduates who are able to know : 1- Theoretical and practical methods for the formation and synthesis of feed mixtures for agricultural animal husbandry projects. 2- Field work skills, and how to establish and prepare animal breeding projects. 3- Types of feed provided to the animal such as threshing and silage... 4- Feed mixtures, their types and their importance in animal productivity. 5- Applying for external tests by local / regional / international bodies.
TEACHING AND LEARNING STRATEGIES	
Strategy	1- Enabling students to analyze and think about topics related to the intellectual framework of fodder and relationships 2- Enabling students to analyze to identify non-traditional feed provided to

		animals			
		3- Enabling students to analyze and think about how to provide environmental conditions that affect agricultural animals in terms of health and productivity .			
		4- Enabling students to analyze to identify the best relationships prevailing in agricultural animal husbandry projects.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introducing students to the appropriate leech for agricultural animals and its specifications	Leech/Types of Leeches/ Specifications of Ideal Leeches	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Level 2	5	Empowering students on how to form relationships to balance nutrients in them	Steps for forming a bush	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
third	5	Introducing students to the most important factors affecting the nutritional value of the	Factors affecting the nutritional value of feedstuffs	1- Theoretical lectures. 2- Practical lectures.	Daily and monthly reports .

		leeches used in animal nutrition		Rendering methods Dialogue and Discussion	
Fourth	5	Introducing students to the most important practical methods used to improve the nutritional value of feedstuffs used in feeding farm animals, especially ruminants	Improving the nutritional value of low-quality feedstuffs	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Fifth	5		Paper I		Daily and monthly reports .
Six	5	Introducing students to the sections and types of feed used in animal nutrition	Classification of Fodder /Concentrate / Coarse	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Seven	5	Introducing students to food additives, their types and their importance in terms of health and economic	Food Additives	1- Theoretical lectures. 2- Practical lectures. Rendering	Daily and monthly reports .

				methods Dialogue and Discussion	
Eighth	5	Enabling students to manufacture and mix meals . as well as methods of preserving fodder	Feed Manufacturing/Silage Manufacturing/Threshing Manufacturing	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Nine	5	Introducing students to the most important points and general specifications that must be available in fodder materials	Feed Material Evaluation	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
10th Grade	5		Paper II		Daily and monthly reports .
11th Grade	5	Introducing students to the animal's protein needs according to age and production	Nutritional Needs/Protein Needs	1- Theoretical lectures. 2- Practical lectures. Rendering methods	Daily and monthly reports .

				Dialogue and Discussion	
12th Grade	5	Introducing students to the animal's needs of mineral elements and vitamins according to age and production .	Energy needs/ needs for minerals and vitamins	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Thirteenth	5	Enabling students to know the needs of farm animals of nutrients and according to production .	Milk Cows Needs/Meat Cows Needs	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Fourteenth	5	Introducing students to the nutritional needs of sheep and goats.	Sheep Needs/Goat Needs	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
Fifteenth	5	Enabling students to know the needs	Business needs/wool	1- Theoretical	Daily and monthly

		of work animals of nutrients	production needs	lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports					
learning and teaching resources;					
Required textbooks (methodology if any)			McDonald, P., Edwards, R.A. and .1 Greenhalgh, J.F.D., 1987. Animal Nutrition. 4th edn. Longman group (FE) Ltd. - Essex CM20 2JE, England. Pond, W.G., Church D.C. and Pond, K.R., .2 1995. Basic Animal Nutrition and Feeding -- 4th ed. John Wiley & Sons Ltd, 2002.		
Key References (Sources)			1 animal-nutrition-7th-edition.pdf (wordpress.com) 2- Cultivation and exploitation of fodder. Mahdi Abdul Latif Al-Tamimi . 3- Recent articles from the Internet, specialized scientific fields and a magazine Agricultural Sciences - Iraq and Virtual Library.		
Recommended books and references (scientific journals, reports...)			animal-nutrition-7th-edition.pdf (wordpress.com)		
Electronic references, websites ,.....			Agriculture Free Full-Text Animal		

	Nutrition and Productions (mdpi.com)
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Course Description Form

1- Course Name
Animal diseases
2-CourseCode

ANDI323					
3-semester/ year					
2023 – 2024 (Spring Semester)					
4-The date of preparing this description					
01.04.2024					
5. Forms of Attendance: Compact					
In-Person					
6. Number of study hours (total) / number of units (total)					
75 hours (2 theoretical + 3 practical) * 15 weeks / (3.5 units)					
7. Name of the course administrator (if more than one name is mentioned)					
Name: Eng. Dr. Mustafa Adnan Eidan			Email: Mustafa.adnan@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			Identify the most important diseases that affect farm animals and their causes and ways to prevent them		
TEACHING AND LEARNING STRATEGIES					
Strategy	1- Presenting courses using pictures and illustrations that facilitate the student's understanding of the material . 2- Training students to conduct histological examinations of farm animals, identify all pathogens and distinguish between the symptoms of different diseases in a way that develops students' skills in this field . 3- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence .				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First Divorce	5	The student should get acquainted with an introduction to pathology Animal	Introduction to Pathology Animal	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Level 2	5	The student should learn about animal diseases and the resources of the economy	Animal diseases and economic resources	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
third	5	The student should identify the classification of diseases according to their biological causes	Classification of diseases according to their biological causes	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourth	5	The student should identify the infectious substances	Infectious Substances	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Fifth	5	The student should identify the forms of the disease	Forms of the disease	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Six	5	The student should identify the causes of the disease	Pathogens	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Seven	5	The student should know how to stop the disease /defensive means	How to stop the disease /defensive means	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Eighth	5	The student learns about immunity	Immunity	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Nine	5	The student should identify the satisfactory relationships	Satisfactory Relationships	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
10th Grade	5	The student should know about the most important bacterial field diseases	Bacterial Field Diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
11th Grade	5	The student should identify the most important viral field diseases	Viral Field Diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
12th Grade	5	The student should identify the most important external parasitic diseases	External Parasitic Diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Thirteenth	5	The student should be familiar with haematological parasitic diseases	Hematoparasitic diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourteenth	5	The student should be familiar with internal parasitic diseases	Internal Parasitic Diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fifteenth	5	The student should identify the radiation fungus disease	Actinomycosis	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			Poultry and animal diseases		
Key References (Sources)			Poultry Diseases		

Recommended books and references (scientific journals, reports...)	Classification research and various university theses on animal diseases
Electronic references, websites ,.....	

Course Description Form

1- Course Name
Reproductive Physiology
2-CourseCode
REPH317
3-semester/ year
2023 – 2024 (Fall Semester)
4-The date of preparing this description

25 April 2024					
Available attendance forms					
5. Forms of Attendance: Compact					
6. Number of study hours (total) / number of units (total)					
75 hours (2 theoretical + 3 practical) *15 weeks					
Name of course administrator (if more than one name is mentioned)					
Name: M.Sc Ali Jassim Mohammed					
Course Objectives					
Objectives of the unit		Preparing graduates who are able to know : 1- Increasing the productivity of the animal from birth in theory and practice . 2- Field work skills and how to establish and manage projects. 3- The work of the reproductive system in the animal . 4- Applying for external tests by local / regional / international bodies.			
TEACHING AND LEARNING STRATEGIES					
Strategy		1- Enabling students to analyze and think about topics related to the intellectual framework of reproductive philosophy 2- Enabling students to analyze to identify the reproductive system in farm animals. 3- Enabling students to analyze and think about topics related to providing appropriate environmental conditions for the stages of pregnancy and childbirth . 4- Enabling students to obtain knowledge on how to use modern methods to raise the reproductive efficiency of animals .			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	The student should identify the male reproductive system, its anatomy , and its functions	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
2	5	The student should know about the process of sperm formation	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
3	5	The student should know about the female reproductive system, its anatomy , and its functions	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
4	5	The student should be familiar with the process of egg formation	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .

5	5		exam		Daily and monthly reports .
6	5	The student should identify the hormones regulating reproductive endocrine glands, hypothalamus , pituitary gland, pineal gland...etc.)	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
7	5	The student learns about puberty and sexual maturity	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
8	5	The student should learn about the reproductive cycle in agricultural animals	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
9	5	The student should know about the production of gametes (quanta) and transportation	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
10	5	The student should know about fertility and pregnancy	Reproductive Physiology		Daily and monthly reports .
11	5		exam	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
12	5	The student should know about pregnancy and childbirth	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
13	5	The student learns about artificial insemination (introduction , semen collection and artificial insemination techniques)	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays	Daily and monthly reports .

				Dialogue and Discussion	
14	5	The student should learn about managing and improving reproduction	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
15	5		exam	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports					
Learning and Teaching Resources					
Required textbooks (curricular books, if any)	3. Physiology of Farm Animal Reproduction, University of Baghdad, 2011				
Main References (Sources)	• Physiology, Comparative Member Function Science, Friday Youth Foundation, 2009 • A modern machine base from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the consensual library that is related to the material.				
Recommended books and references (scientific journals, reports...)					
E-References, Websites					

Course Description Form

1- Course Name: - Raising and Improving an Animal
2-CourseCode
3- Semester / Year: - Spring Semester/Year 2025
4-The date of preparing this description

5. Forms of Attendance: Compact					
6- Number of study hours (total) / number of units (total): - 75 hours (2 theoretical + 3practical) *15 weeks					
7. Name of the course administrator (if more than one name is mentioned)					
Name: Eng. Hamid Majeed Radi			Email: hameed.majeed@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			• The student should learn about the history of animal breeding and improvement and its development • Introducing the student to the importance of the science of animal breeding and improvement and its relationship with other sciences and focusing on the field of animal production • Introducing the student to the basics of the transmission of traits across generations according to the science of animal breeding and improvement • Introducing the student to the extensions of animal husbandry and improvement with Mendelian genetics • The student's definition of what the genetic material is and its repetition • Introducing the student to the basics of gene expression and how to regulate gene expression		
TEACHING AND LEARNING STRATEGIES					
Strategy		1- Explanation and clarification 2- Method of in-person lecture 3- Student groups 4- Practical lessons in the field 5- Method of self-learning and writing scientific reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2	Foundations of Animal Husbandry and Improvement	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Level 2	2	A brief history of the development of animal husbandry and improvement.	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
third	2	animal science	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Fourth	2	Breed Definition	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Fifth	2	Environment and Inheritance – Similarity and Variation – Impact of the Common	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:

		Environment – Impact of the Common Genetic Source			
Six	2	Types of variation – environmental , genetic	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Seven	2	Quantitative and qualitative qualities and the differences between them	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Eighth	2	Gene replication – factors influencing it	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Nine	2	Genetic Variation – Division of Genetic Variation	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
10th Grade	2	Genetic equivalents, frequency coefficient	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
11th Grade	2	Methods for estimating genetic equivalence – frequency coefficient	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
12th Grade	2	Identical twins and estimating their genetic equivalents, why do we estimate genetic equivalents	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Thirteenth	2	Genetic and phenotypic correlation, selection – types of selection, individual selection – repeated observations, election by descent , family selection, offspring test	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Fourteenth	2	Methods of election for more than one attribute – phased election, election according to independent levels, electoral guide, educational value	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
Fifteenth	2	Internal education (kinship education) –	Animal Breeding and Improvement	Explanation and presentation of	Exam:

		internal education laboratories and degree of kinship , model education, " external education (dimensional education) – external mixing , mixing of breeds (hybrid strength), grading , reality of cows		the model and lecture	
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			1- Animal Breeding and Improvement Book (2003) Author. 2. Internet		
Key References (Sources)			Breeding and Genetics. 2- Muir , W.M. and S.E., Aggrey (2003) Poultry Genetics , Breeding and Biotechnology. 3- Principles of Genetics , Editors : D.P.,Snustad and M.J.,Simmons (2000) . 4- Interactive concepts in Biology . Tenth Edition Version (4.0) CD. 5. Internet		
Recommended books and references (scientific journals, reports...)			Iraqi academic scientific journals J. of Heredity		
Electronic references, websites ,.....			Library Genesis		

Course Description Form

1- Course Name: - English Language3
2-CourseCode
3- Semester / Year: - Spring Semester/Year 2025
4-The date of preparing this description

5. Forms of Attendance: Compact					
6. Number of study hours (total) / number of units (total)					
7. Name of the course administrator (if more than one name is mentioned)					
Dunia Mohi Mohsen			Email:		
8. Course Objectives					
Course Objectives			1- The student should get acquainted with the concept of the English language 2- The student should learn about the ways of expressing the English language 3- The student should know the rules of the English language 4- The student should describe the types of English language 5- To know how to use the English language		
TEACHING AND LEARNING STRATEGIES					
Strategy	1- Explanation and clarification 2- Method of in-person lecture 3- Student groups, conversations and observations 4- Method of self-learning and writing scientific reports				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	The student should get acquainted with the concept of the English language	Reviewing times	Explanation and presentation of the model and lecture	Exam:
2	1	The student should get acquainted with the sources of the English language	English in agriculture(reading3)	Explanation and presentation of the model and lecture	Exam:
3	1	The student should learn about the types of English .	Exercise (reading 3)	Explanation and presentation of the model and lecture	Exam:
4	1	The student should know the rules of the English language.	Progressive tense/with diagrams.	Explanation and presentation of the model and lecture	Exam:
5	1	The student should know the basics of the English language.	Progressive tense/with diagrams.	Explanation and presentation of the model and lecture	Exam:
6	1	Language Practice	First Month Exam	In-Person	Comprehensive questions about lectures + reports
7	1	The student should know the times of the English language.	Studying the scientific term	Explanation and presentation of the model and lecture	Exam:
8	1	The student should learn how to express sentences in English.	Studying the scientific term	Explanation and presentation of the model and	Exam

				lecture	
9	1	The student should learn how to express sentences in English.	saidi	Explanation and presentation of the model and lecture	Exam:
10	1	The student should learn how to express sentences in English.	Legal Translation into Arabic	Explanation and presentation of the model and lecture	Exam
11	1	The student should learn how to express sentences in English.	Legal Translation into Arabic	Explanation and presentation of the model and lecture	Exam
12	1	The student should learn how to express sentences in English.	Re-reading for mor	Explanation and presentation of the model and lecture	Exam
13, 14	2	The student should learn how to express sentences in English.	Re-reading for mor	Explanation and presentation of the model and lecture	Exam
15	1	The student should learn how to express sentences in English.	Second Month Exam	Explanation and presentation of the model and lecture	Comprehensive questions about the lecture + reports
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			1-2English in Ariculture Introduction to English		
Key References (Sources)			1- Study/ teams of Saudi professional/ Ahmed Othman 2- Review Victor Sahab, The Arab World Languages (King Abdulaziz Center for World Culture,an initiative of Saudi Aramco) 3- 4 Study/ teams of Saudi professional/ Ahmed Othman/ 4- Review of Victor Sahab, Arabic in World Languages)		
Recommended books and references (scientific journals, reports...)			Iraqi academic scientific journals		
Electronic references, websites ,.....			Journal English lan.		

Course Description Form

1- Course Name
Feed poultry
2-CourseCode
POBN445
3-semester/ year
2023 – 2024 (Fall Semester)
4-The date of preparing this description

8 February 2024					
5. Forms of Attendance: Compact					
6. Number of study hours (total) / number of units (total)					
75 hours (2 theoretical + 3 practical) *15 weeks					
Name of course administrator (if more than one name is mentioned)					
Name: M.Sc Ali Jassim Mohammed					
Course Objectives					
Objectives of the unit	Preparing graduates who are able to know : 1- How to digest, absorb and metabolize nutritional nutrients. 2- Field work skills, and how to create and prepare projects for raising chicken and poultry . 3- How to make feed mixes used in poultry projects. 5- The work of the digestive system in the animal . 5- Applying for external tests by local / regional / international bodies.				
TEACHING AND LEARNING STRATEGIES					
Strategy	1- Enabling students to analyze and think about topics related to the intellectual framework of poultry feeding. 2- Enabling students to analyze to identify the digestive system and its work in poultry birds. 3- Enabling students to identify the main nutrients. 4- Enabling students to identify the best ways to synthesize feed mixes. 5-Enabling students to identify the optimal use of fodder materials available in the market .				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introducing students to energy, its components, sections, importance and the factors affecting it .	Energysources .Split it up .Influences	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
2	5	The student should identify the proteins, their types, classification, their importance for birds, and the impact of increasing and decreasing them .	Proteins – their types and classification The effect of their increase and decrease	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
3	5	Introducing students to the most important factors affecting protein utilization.	Proteins and factors affecting their utilization	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
4	5	Enabling students to know the vitamins and their importance for the bird and its sections and the factors affecting them .	Vitamins - their classification and factors affecting their needs	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .

5	5	Introducing students to inorganic elements and their importance to birds and provoking their increase and decrease .	Minerals, their classification, the effect of their increase and decrease	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
6	5	Introducing students to the nutrients , the importance of water for the bird and its sources .	Water is its importance, functions, sources and quality	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
7	5		Monthly Exam		Daily and monthly reports .
8	5	Enabling students to know the digestive system and its work in poultry birds, types of digestion , and nutrient metabolism.	Digestion and Metabolism - Digestive System - Its Functions	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
9	5	Introducing students to the end products of digestion of nutrients , and the factors affecting digestion .	End-products of digestion - factors affecting digestion	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
10	5	Introducing students to the feed used in feeding poultry birds, their sources and types .	Primary fodder materials, their sources and types		Daily and monthly reports .
11	5	Introducing students to food additives, their types and their importance in terms of health and economic	Vitamins, minerals and feed additives	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
12	5	Enabling students to know the feed concentrates and mixtures used in poultry nutrition and its production requirements	Feed concentrates, mixtures and their production requirements	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
13	5	Introducing students to the fodder factory, its departments and its importance in animal production projects.	Feed Production and Manufacturing Feed Factory Its	1- Theoretical lectures. 2- Practical lectures.	Daily and monthly reports .

			Importance and Sections	Displays Dialogue and Discussion	
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports					
Learning and Teaching Resources					
Required textbooks (curricular books, if any)			1. Al Yaseen. Ali Abdul Khaliq , Abdul Abbas , Mohammed Hassan (2010), Poultry Feeding, University of Baghdad , Faculty of Agriculture . 2. Al-Kassar, Ali Mahmoud Jawad , Ammar Hussein , Ali Saif (2021). Poultry feed and chemical analysis. University of Kufa . Faculty of Agriculture		
Main References (Sources)			1 - Recent articles from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq and the library of satisfaction, which is related to the feeding of poultry birds.		
Recommended books and references (scientific journals, reports...)			Handbook of Poultry Nutrition VetBooks Poultry Nutrition MDPI Books		
E-References, Websites			Poultry Science		

Course Description Form

1- Course Name
Breeding and improving poultry
2-CourseCode
POBR452
3-semester/ year
2023 – 2024 (Spring Semester)
4-The date of preparing this description
01.04.2024

5. Forms of Attendance: Compact					
In-Person					
6. Number of study hours (total) / number of units (total)					
75 hours (2 theoretical + 3 practical) * 15 weeks / (3.5 units)					
7. Name of the course administrator (if more than one name is mentioned)					
Name: Eng. Dr. Mustafa Adnan Eidan			Email: Mustafa.adnan@uomisan.edu.iq		
8. Course Objectives					
Course Objectives			Introducing the student to : 1- Genetic principles of breeding and improvement programs for poultry birds. 2- Traditional means and modern trends in the improvement of poultry birds. 3-How to use genetic engineering in breeding and improving poultry .		
TEACHING AND LEARNING STRATEGIES					
Strategy		1Explanation and Explanation -2 Lecture Method -3 Student Groups			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First Divorce	5	The student should get acquainted with the science of education and improvement	Pedagogy and Improvement	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Level 2	5	The student should know about Mendelian and non-Mendelian inheritance	UNTRANSLATED_CONTENT_END	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
third	5	The student learns about lethal genes	Deadly Genes	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourth	5	The student learns about genetics related to sex	Gender-Related Genetics	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Fifth	5	The student learns about the inheritance of clans	Clan Inheritance	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Six	5	The student should identify the genetic equivalents	Genetic equivalents	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Seven	5	The student should learn about methods of estimating genetic equivalents	Genetic equivalence estimation methods	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Eighth	5	UNTRANSLATED_CONTENT_START الطالب يتعرف ان أنواع على الانتخاب UNTRANSLATED_CONTENT_END	Election Types	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Nine	5	The student should learn about the methods of estimating the election	Election Estimation Methods	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
10th Grade	5	The student should learn about the methods of parenting	Pedagogy	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
11th Grade	5	The student should recognize the similarity and difference	Similarity and Difference	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
12th Grade	5	The student should identify the coefficient of kinship	Coefficient of kinship	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Thirteenth	5	The student should learn about the principles of molecular genetics	Principles of Molecular Genetics	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourteenth	5	The student learns about the structure of DNA	DNA synthesis	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fifteenth	5	The student should identify genetic mutations	Genetic mutations	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					

Required textbooks (methodology if any)	Poultry Breeding and Improvement, Raad Al-Saadoun
Key References (Sources)	Breeding and Improving Poultry, 2001a.Dr. Khaled Hamed Hassan
Recommended books and references (scientific journals, reports...)	Classification research and various university theses on animal diseases
Electronic references, websites ,.....	Academic Journals Research

Course Description Form

1- Course Name
Production of sheep and goats
2-CourseCode
SHGP443
3-semester/ year
The first/summer semester in 2024
4-The date of preparing this description
5. Forms of Attendance: Compact
6. Number of study hours (total) / number of units (total)

2 HRS					
7- Name of the course officer (if more than one name is mentioned): - Maysa Mohsen Muhammad Ali					
Name: Maysa Mohsen Mohamed Ali			Email: mrs.mysaarystmaway@gmail.com		
8. Course Objectives					
Course Objectives			• Prepare graduates who are able to work on projects • To raise lambs to produce meat to meet the consumer's need • Ewes care according to physiological and productivity status • Take advantage of local sheep breeds to provide meat and milk		
TEACHING AND LEARNING STRATEGIES					
Strategy		• Teaching with Presentations • Practical lessons in the field • Flipped Teaching • Method of self-learning and writing scientific reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2	Recognize theories about global and local breeds	Sheep and goat breeds	Presentation	duty
Level 2	2	Skills in developing breeding and care fields according to the physiological stages	Setting up and managing the herd	Methodical books	mug, tankard, jug, ewer, cone
third	2	Election of breeding sheep and rams to establish the production field	Election of sheep		Rsg3: Scientific Research
Fourth	2	employs information to solve nutrition		Lecture Methodology books/production of	Reports & Coz

		problems		sheep and goats	
Fifth	2				Exam
Six	2	Identification of the breeding season with ornamental sheep and by geographical location	Reproduction of sheep and goats	Presentation	duty
Seven	2	Controlling breeding with sheep	Care of newborn lambs/nutrition and early weaning	Presentation	Daily Posts and Coz
Eighth	2				Exam
Nine	2	Knowing the structure of balanced relations tmr	Nutrition and diet in food rationing	Presentation/Lecture Method	mug, tankard, jug, ewer, cone
10th Grade	2				Exam
11th Grade	2	Breeding lambs to produce veal and kunduz meat	Fattening lambs	Presentation	Coz and Attendees
12th Grade	2	Identify the importance of sheep's milk for cheese making	Milk production in sheep		Exam
Thirteenth	2				A
Fourteenth	2	Identify the importance of wool and its entry into wool industries	Wool production		A
Fifteenth	2				Exam
Course Evaluation					

Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)	
learning and teaching resources;	
Required textbooks (methodology if any)	Production of sheep and goats /course To Dr. Muzaffar Nafie Al-Sayegh and Jalal Eliya Al-Sayegh
Key References (Sources)	Farm Animal Management Sastre N.SR and Thomas .Yeah.كي
Recommended books and references (scientific journals, reports...)	Animal physiology Prof. Dr. Jamal Al-Din Abdul Rahim Dr. Samir Zaki Al-Zarkouni Local Farm Animals in Iraq Dr. Mossadeq Delphi Ali
Electronic references, websites ,.....	

Course Description Form

1. Course Name: meat production	
2. Course Code:	
3. Semester / Year: Fall semester 2024	
4. Description Preparation Date:	
5. Forms of Attendance: Compact	
6. Number of Studying 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: noor falah mahde shabib munshid jasim	Email:
8. Course Objectives	

Course Objectives		1 Introducing the student to the types of beef cattle, the habitat of each type, what are the known methods of raising them in the world, what are the methods that increase production efficiency in a way that is compatible with each type of beef cattle, what are the special concerns for producing beef cattle and their axes, and how to invest in production efficiency. 2. Giving the student important information and foundations about beef cattle, which will enable him to manage beef cattle fields and produce animals with high meat production qualities compared to the traditional methods used that are not based on sound scientific foundations.			
9. Teaching and Learning Strategies					
Strategies		Explanation and clarification The lecture method Writing scientific reports Scientific trips			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The concept of traditional and modern meat production	meat production	Explanation presentation of the model and lecture	the exam
2	2	Biological hubs for meat production	meat production	Explanation, presentation of the model and lecture	the exam
3	2	The reality of production and consumption of beef cattle	meat production	Explanation, presentation of the model and lecture	the exam
4	2	Challenges and obstacles to beef cattle production	meat production	Explanation, presentation of the model and lecture	the exam
5	2	Growth and development of meat animals	meat production	Explanation, presentation of the model and lecture	the exam
6	2	Factors affecting growth	meat production	Explanation, presentation of the model and lecture	the exam
7	2	Breeding patterns for meat animals	meat production	Explanation, presentation of the model and lecture	the exam
8	2	Optimal investment for production efficiency	meat production	Explanation, presentation of the model and lecture	the exam
9	2	Composition of carcasses and	meat production	Explanation, presentation of	the exam

		slaughtering ratio		the model and lecture	
10	2	Modern production technologies	meat production	Explanation, presentation of the model and lecture	the exam
11	2	Marketing class	meat production	Explanation, presentation of the model and lecture	the exam
12	2	Genetic variation in meat traits	meat production	Explanation, presentation of the model and lecture	the exam
13	2	Establishing and managing a herd of beef cattle	meat production	Explanation, presentation of the model and lecture	the exam
14	2	Beef cattle production systems	meat production	Explanation, presentation of the model and lecture	the exam
15	2	Raising young calves	meat production	Explanation, presentation of the model and lecture	the exam
11. Course Evaluation					
Distribution of the grade out of 50 according to the tasks assigned to the student, such as homework, daily, oral, monthly, written exams, reports, etc.					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)					
Main references (sources)			Beef cattle production - Dr. Fouad Abdel Latif Abdel Karim		
Recommended books and references (scientific journals, reports...)			Iraqi academic scientific journals Journal of Agricultural Sciences/University of Basra		
Electronic References, Websites			Animal Science Journal		

Course Description Form

1- Course Name	
Management and production of poultry	
2-CourseCode	
POPR441	
3-semester/ year	
2023 – 2024 (Fall Semester)	
4-The date of preparing this description	
8 February 2024	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total)	
75 hours (2 theoretical + 3 practical) *15 weeks	
Name of course administrator (if more than one name is mentioned)	
Name: M.Sc Ali Jassim Mohammed	
Course Objectives	
Objectives of the unit	Preparing graduates who are able to know : 1- How to establish breeding and management projects for poultry birds. 2- Field work skills, and how to create and prepare projects for raising chicken and poultry . 3- How to make feed mixes used in poultry projects. 4- Applying for external tests by local / regional / international bodies.
TEACHING AND LEARNING STRATEGIES	

Strategy		1- Enabling students to analyze and think about topics related to the intellectual framework of the subject of poultry management and production. 2- Enabling students to analyze to identify the topics related to measuring productivity . 3- Enabling students to identify the optimal use of fodder materials available in the market .			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Introducing students to the general concept of managing poultry projects	Poultry science and the concept of managing poultry projects.	Theoretical lectures. Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
2	5	The student should learn about the importance of poultry projects	Importance of poultry projects Egg and meat production projects	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
3	5	Enabling students to know the internal organs of the chicken and its functions,(male and female digestive and reproductive systems and the components of the egg.	The internal organs of the chicken and its functions,(male and female digestive and reproductive and egg components)	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
4	5	The student should learn about the types of poultry houses and breeding supplies	Types of poultry houses and breeding supplies.	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
5	5	The student should be familiar with hatching and hatching management (selection of hatching egg specifications, treatment of hatching eggs before and during hatching , stages of embryonic development,types of hatching,factors affecting fertility and hatching rates, hatching problems)	Hatching and Hatch Management	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
6	5	The student should be familiar with the management and production of meat broilers (types of modern breeds and their	Management and production of meat poultry	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and	Daily and monthly reports .

		specifications, nursing and caring for broilers, raising and caring for meat broilers, breeding systems, feeding meat broilers and types of ties ,marketing meat broilers, meat preparation operations in slaughterhouses)		Discussion	
7	5	The student should know about the management and production of laying hens (types of modern breeds and their specifications, nursing and care of laying hens, breeding systems, feeding laying hens during the stages of growth and production , calculations of egg production rates)	Management and production of laying hens	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
8	5	Enabling students to know the compulsory qalash (its methods and benefits)	Mandatory straws	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
9	5	Enabling students to know the management of mothers' herds (mothers of meat and eggs)	Management of maternal herds (broiler and egg mothers)	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
10	5	The student should learn about raising turkey, ducks and almonds .	Raising turkeys, ducks and almonds .	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
11	5	The student should be familiar with the management of poultry fields in hot weather .	Manage poultry fields in hot climates .	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
12	5	The student should get acquainted with the management of fodder factories and fodder	Management of fodder factories and preparation of fodder .	1- Theoretical lectures. 2- Practical lectures.	Daily and monthly reports .

		preparation		Displays Dialogue and Discussion	
13	5	Enabling students to know poultry disease and methods of prevention and treatment .	Poultry disease and methods of prevention and treatment .	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports					
Learning and Teaching Resources					
Required textbooks (curricular books, if any)			1. Al-Zubaidi , Suhaib Saad Alwan (1986), Poultry Management, University of Basra .		
Main References (Sources)			A modern machine base from the Internet and from specialized scientific fields, the Journal of Agricultural Sciences - Iraq, and the consensual library that is related to the material.		
Recommended books and references (scientific journals, reports...)			Handbook of Poultry VetBooks		
E-References, Websites			Poultry Science Poultry (almerja.com)		

Course Description Form

1. Course Name: Pasture management	
2. Course Code:	
3. Semester / Year: Fall Semester - First Course	
4. Description Preparation Date: 20/9/ 2023	
5. Forms of Attendance: weekly	
6. Number of Studying Hours (Total) / Number of Units (Total) ^{٧٥} hours	
7. Course Administrator's Name (mention all, if more than one name)	
Name: M.M. Rasha Naji Abd	Email: rashanaji@uomisan.edu.iq
8. Course Objectives	
Course Objectives	• The student is able to understand and comprehend the pasture management subject • Enables the student to know the most important ways to protect natural pastures • Familiarity with the most important types of natural pastures • • • Detection and knowledge of the palatability of pasture plants.

		• • • • The student can judge the quality of pasture plants			
9. Teaching and Learning Strategies					
Strategies		• • •The theoretical part of the lecture is interactive, brainstorming, dialogue, and discussion. As for the practical part, there is an assignment to group work to reveal leadership skills, and assignment of tasks and a report for each field visit.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	٢ Theoretical ٣Practical	Pasture management	The importance of pastures	Theoretical + Practical	Exams + Cups
2	٢ Theoretical ٣Practical	Pasture management	. Vegetable clothing	Theoretical + Practical	Exams + Cups
3	٢ Theoretical ٣Practical	Pasture management	Environmental factors and natural pastures	Theoretical + Practical	Exams + Cups
4	٢ Theoretical ٣Practical	Pasture management	. Climatic factors	Theoretical + Practical	Exams + Cups
5	٢ Theoretical ٣Practical	Pasture management	Pasture management and its relationship to soil and water conservation	Theoretical + Practical	Exams + Cups
6	٢ Theoretical ٣Practical	Pasture management	. The role of plants in maintaining soil and pastoral areas in Iraq and the world	Theoretical + Practical	Exams + Cups
7	٢ Theoretical ٣Practical	Pasture management	Monthly exam.	Theoretical + Practical	Exams + Cups
8	٢ Theoretical ٣Practical	Pasture management	Grazing and its various effects on fodder production, plant growth, and root growth	Theoretical + Practical	Exams + Cups
9	٢ Theoretical ٣Practical	Pasture management	Animal load and its determining factors	Theoretical + Practical	Exams + Cups
10	٢ Theoretical ٣Practical	Pasture management	Exploitation of natural pastures	Theoretical + Practical	Exams + Cups

11	٢ Theoretical ٣Practical	Pasture management	Sources of exploitation of pastoral plants and the condition of natural pastures	Theoretical + Practical	Exams + Cups
12	٢ Theoretical ٣Practical	Pasture management	Livestock management and pasture redressing	Theoretical + Practical	Exams + Cups
13	٢ Theoretical ٣Practical	Pasture management	For natural and artificial coverings and harmful plants in pastures	Theoretical + Practical	Exams + Cups
14	٢ Theoretical ٣Practical	Pasture management	Methods of taking pasture samples and estimating pasture productivity	Theoretical + Practical	Exams + Cups
15	٢ Theoretical ٣Practical	Pasture management	Monthly exam	Theoretical + Practical	Exams + Cups

11. Course Evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, such as homework, daily, oral, monthly, written exams, reports, etc.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Pasture management book Al-Takriti Ramadan, Taif Ahmed and Abbas Mahdi Hassan (1976 Al-Tamimi, Mahdi Abdel Latif (1987(
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1- Course Name
Poultry diseases
2-CourseCode
PODI450
3-semester/ year
2023 – 2024 (Spring Semester)
4-The date of preparing this description
01.04.2024
5. Forms of Attendance: Compact
In-Person
6. Number of study hours (total) / number of units (total)
75 hours (2 theoretical + 3 practical) * 15 weeks / (3.5 units)
7. Name of the course administrator (if more than one name is mentioned)

Name: Eng. Dr. Mustafa Adnan Eidan					
No. Eng. Ali Jassim Mohammed		Email: Mustafa.adnan@uomisan.edu.iq			
8. Course Objectives					
Course Objectives		Graduating students capable of: • Working in the field of poultry breeding and production with theoretical and applied knowledge regarding the subject of management and production of poultry birds. Obtain the skills required for the postgraduate plan. • Applying for external tests by local/ regional / international bodies. • Thinking and analytical skills that enable knowledge of how to establish, prepare and supervise poultry breeding projects. • Providing students with work skills in scientific and practical fields			
TEACHING AND LEARNING STRATEGIES					
Strategy	1- Presenting courses using pictures and illustrations that facilitate the student's understanding of the material . 2- Training students to conduct histological examinations of poultry birds, identify all pathogens and distinguish between the symptoms of different diseases in a way that develops students' skills in this field . 3- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence .				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

First Divorce	5	Introducing students to general information about poultry diseases	General Introduction to Poultry Diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Level 2	5	Introducing students to the vocabulary of poultry diseases	Poultry Pathology	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
third	5	Explain and clarify the factors affecting the incidence of various diseases	Factors associated with the spread of diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourth	5	Introducing students to the most important pathogens	Pathogens and their types	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Fifth	5	Introducing students to all pathological signs	for signs of clinical morbidity	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Six	5	Introducing students to the requirements of diagnosing various diseases	UNTRANSLATED_CONTENT_ UNTRANSLATED_CONTENT_END	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Seven	5	Veterinary Treatments	Types of Veterinary Medicines	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Eighth	5	Pathogenic bacteria	Bacterial diseases in poultry	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Nine	5	Viruses and diseases	Viral diseases in birds	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
10th Grade	5	Explaining and clarifying healthy ways to control diseases	Health Conditions for Poultry Breeding	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
11th Grade	5	Explanation of immunization methods in poultry	Veterinary brucella vaccines	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
12th Grade	5	Detailed explanation of nutritional diseases	Malnutrition diseases	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Thirteenth	5	Disease Prevention	Centers for Disease Control.	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourteenth	5	Introducing students to how to deal with biosecurity measures	Biosecurity in poultry farming	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fifteenth	5		Monthly Exam	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			Poultry and animal diseases		
Key References (Sources)			Poultry Diseases		

Recommended books and references (scientific journals, reports...)	Classification researches and different university theses on animal products
Electronic references, websites ,.....	https://almerja.com/archive.php?1518 https://almerja.com/archive.php?fid=1520

Course Description Form

1- Course Name
Molecular Biology
2-CourseCode
MOBI449
3-semester/ year
2023 – 2024 (Fall Semester)
4-The date of preparing this description
01.04.2024
5. Forms of Attendance: Compact
In-Person
6. Number of study hours (total) / number of units (total)
75 hours (2 theoretical + 3 practical) * 15 weeks
7. Name of the course administrator (if more than one name is mentioned)

Name: Eng. Dr. Abdul Redha Aati Jaafar No. Doa'a		Email: ridha84@uomisan.edu.iq			
8. Course Objectives					
Course Objectives		● Introducing students to the basics of molecular biology ● Developing students' theoretical and practical skills in DNA and RNA ● Developing students' skills to identify genetic mutations, transcription and replication of DNA ● Mechanisms used in the preparation and extraction of DNA			
TEACHING AND LEARNING STRATEGIES					
Strategy	4- Presentation of courses using pictures and illustrations that facilitate the student's understanding of the subject 5- Training students to conduct laboratory tests in a way that develops students' skills in this field 6- Conducting discussions and dialogues with students, which in turn enhances the student's self-confidence .				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	5	Introducing students to the cell, its components and functions	Animal Cell – Functions of Cell Components	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Level 2	5	Introducing students to the concept of molecular biology and cell components	The Concept of Molecular Biology – Types of Molecules in a Cell	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
third	5	Introducing students to the molecular structure of DNA	Molecular structure of DNA	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourth	5	Definition of Students by installing the double helix of DNA according to Watson and Crick	Watson & Crick DNA Double Helix Installation	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fifth	5	Definition of Students By the approved method of studying cells and tissues	Approved method of studying cells and tissues	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Six	5	Introducing students to methods of monitoring the behavior of cells and tissues	Methods of monitoring the behavior of cells and tissues - How to use the optical interference microscope to obtain information regarding the concentration of substances in the cell	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Seven	5	Introducing students to the ways in which genetic information is transmitted between parts of the cell	How genetic information stored in DNA can travel between cell parts and determine function	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Eighth	5	Definition of Students the process of protein formation in the cell	The process of protein formation in the cell	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Nine	5	Definition of Students Organizing genetic activities within the cell	Organizing genetic activities within the cell	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
10th Grade	5	Get to know the students gene expression	Gene expression	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
11th Grade	5	Definition of Students Genetics, Reproduction and Translation	Genes - Reproduction and Translation	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
12th Grade	5	Education for students with disabilities Separating the DNA from the rest of the cell components	Separating the DNA from the rest of the cell components	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .

Thirteenth	5	Definition of Students DNA-Conformation poses	DNA-Conformation poses	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fourteenth	5	Definition of Students DNASynthesis	DNASynthesis	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Fifteenth	5	Education for students with disabilities Estimation of spectral nucleic acid purity	Estimation of spectral nucleic acid purity	Theoretical lectures Practical lectures Rendering methods Discussion and dialogue	Daily and monthly reports .
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			Mustafa , Nashat Ghalib (2018) Molecular Biology. - First editions. University Book House.		

Key References (Sources)	Kazanji , Mohammed Omar and Jabr , Hamid Abboud (2017) Molecular Biology. - First editions. University of Baghdad FACULTY OF AGRICULTURE
Recommended books and references (scientific journals, reports...)	Payne D.A.(2016). Basics of molecular biology. <i>In molecular pathology in clinical paractice</i> (pp. 1-17). springer, cham
Electronic references, websites ,.....	https://www.scribd.com/document/491738379

Course Description Form

1- Course Name	
Production of milk cows	
2-CourseCode	
DACP448	
3-semester/ year	
Chapter Two/Quarterly Year 2024	
4-The date of preparing this description	
24/4/2024	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total)	
3 hours	
7- Name of the course administrator (if more than one name is mentioned): - Maysa Mohsen	
Name: Maysa Mohsen	Email: mrs.mysaarystmaway@gmail.com
8. Course Objectives	
Course Objectives	• Prepare graduates who are able to use modern scientific methods in managing milk production farms • Developing students' awareness of the

			problems, the most important of which are the problems affecting the field of shop production		
			Using new methods to practice professionalism in shop production projects		
TEACHING AND LEARNING STRATEGIES					
Strategy		- Teaching with Presentations - Practical lessons in the field - Flipped Teaching - Method of self-learning and writing scientific reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	3	Thinking skills about the importance of raising dairy cows	The economic importance of animal products and the importance of raising livestock and the most important breeds	Presentation	duty
Level 2	3	Analyzes information in the field of knowing the type of authentic breeds in milk production	Recent development of livestock in the world /Factors that led to a decrease in livestock production in Iraq /Evaluation of milk cows	Methodical books	mug, tankard, jug, ewer, cone
third	3	Learn the most important ways to balance relationships and according to the production stage	Nutritional Needs, Milk Cowgirl, Acidic and Basal Raspberry		Quiz
Fourth	3	employs information to solve nutrition problems	Environmental and genetic factors affecting milk production/hormonal control over the development of the lactic gland	Lecture Methodology Books (Production of Milk Cattle by Dr. Nateq Hamid Al-Qudsi	Reports & Coz
Fifth	3			Workshop	Exam
Six	3	Expresses his opinion on methods of feeding animals at different stages of production suitable for environmental conditions	The economic importance of differences between breeds	Presentation	duty

Seven	3			Workshop	Daily Posts and Coz
Eighth	3		Reproduction in cows	Presentation	Rsg3: Scientific Research
Nine	3		Methods used in genetic improvement	Lecture method	mug, tankard, jug, ewer, cone
10th Grade	3				Exam
11th Grade	3		Nutrition of milk cows	Presentation	Coz and Attendees
12th Grade	3				mug, tankard, jug, ewer, cone
Thirteenth	3				Exam
Fourteenth	3				Exam
Fifteenth	3				Exam
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			Cattle For Dr. Ahmed Al-Haj Taha Saleh, Akram Thanoun Younis and Mahmoud Rashed Al-Rashed Production of milk cattle Dr. Nateq Hamid Al-Qudsi and Jiale Fikor Elia		
Key References (Sources)			Farmyard animals Sastre N.SR and Thomas .Yeah.كي		
Recommended books and references (scientific journals, reports...)			Animal physiology Prof. Dr. Jamal Al-Din Abdul Rahim Dr. Samir Zaki Al-Zarkouni		
Electronic references, websites ,.....					

Course Description Form

1. Course Name: meat science	
2. Course Code:	
3. Semester / Year: Spring semester 2024	
4. Description Preparation Date:	
5. Forms of Attendance: Compact	
6. Number of Studying 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: noor falah mahde shabib munshid jasim	Email:
8. Course Objectives	
Course Objectives	•Introducing the student to important definitions related to the subject of meat science •Study the chemical composition of meat and the processes of converting muscle into meat •Introducing the student to the carcasses and meat of different animals •Teaching the student how to preserve fresh, chilled and frozen meat •How to obtain highly tender meat • Introducing the student to the most important causes of meat contamination and methods of packaging
9. Teaching and Learning Strategies	

Strategies		Explanation and clarification The lecture method Writing scientific reports Scientific trips			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	the introduction	meat science	Explanation presentation of the model and lecture	the exam
2	2	Types of red and white meat	meat science	Explanation, presentation of the model and lecture	the exam
3	2	Types of voluntary and involuntary muscles	meat science	Explanation, presentation of the model and lecture	the exam
4	2	Chemical composition of meat	meat science	Explanation, presentation of the model and lecture	the exam
5	2	Mechanics of muscle contraction	meat science	Explanation, presentation of the model and lecture	the exam
6	2	Regor mortis and the factors affecting it	meat science	Explanation, presentation of the model and lecture	the exam
7	2	Physical properties of fresh meat	meat science	Explanation, presentation of the model and lecture	the exam
8	2	Physical properties of cooked meat	meat science	Explanation, presentation of the model and lecture	the exam
9	2	The most important techniques for improving tenderness	meat science	Explanation, presentation of the model and lecture	the exam
10	2	Meat storage methods	meat science	Explanation, presentation of the model and lecture	the exam
11	2	Meat contamination	meat science	Explanation, presentation of the model and lecture	the exam
12	2	Meat processing	meat science	Explanation,	the exam

				presentation of the model and lecture	
13	2	Meat packaging	meat science	Explanation, presentation of the model and lecture	the exam
14	2	Sausage industry	meat science	Explanation, presentation of the model and lecture	the exam
15	2	Smoking meat	meat science	Explanation, presentation of the model and lecture	the exam
11. Course Evaluation					
Distribution of the grade out of 50 according to the tasks assigned to the student, such as homework, daily, oral, monthly, written exams, reports, etc.					
12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)			Meat Science Book - Dr. muharib Abdul Hamid Taher		
Main references (sources)			Meat Technology Book - Dr. Youssef Al-Sharik and the book “Meat Science and Technology” - Dr. Majed Bashir Al-Aswad		
Recommended books and references (scientific journals, reports...)			Iraqi academic scientific journals Journal of Agricultural Sciences/University of Basra		
Electronic References, Websites			Animal Science Journal		

Course Description Form

1- Course Name	
Buffalo production	
2-CourseCode	
BUPR442	
3-semester/ year	
Chapter Two/Quarterly Year 2024	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total)	
2 HRS	
7- Name of the course officer (if more than one name is mentioned): - Maysa Mohsen Muhammad Ali	
Name: Maysa Mohsen Mohamed Ali	Email: mrs.mysaarystmaway@gmail.com

8. Course Objectives					
Course Objectives			• Prepare two graduates who are able to work on the farm to meet the protests of the buffalo • Buffalo care according to physiological and productivity status • Taking advantage of buffalo to provide meat and milk		
TEACHING AND LEARNING STRATEGIES					
Strategy		• Teaching with Presentations • Practical lessons in the field • Flipped Teaching • Method of self-learning and writing scientific reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	2	Identify theories about the origin of buffalo	The origin, starch and location of buffalo in the animal kingdom/the reality of global and local buffalo production	Presentation	duty
Level 2	2	Skills in developing buffalo breeding fields	Global and Local Buffalo Breeds	Methodical books	mug, tankard, jug, ewer, cone
third	2	Using modern tools and devices in the buffalo shepherdess	So he slit his throat and ran the milk in the buffalo.		Rsg3: Scientific Research
Fourth	2	employs information to solve nutrition problems	Nutrition and diet in buffalo and food rationing	Lecture Methodology Books/ Buffalo Production - Dairy Cattle Production	Reports & Coz

Fifth	2				Exam
Six	2	Buffalo and Kandouz meat production projects	Buffalo meat production, buffalo fattening methods and types of fattening	Presentation	duty
Seven	2		Buffalo Calves Care/Nutrition and Early Weaning	Presentation	Daily Posts and Coz
Eighth	2				Exam
Nine	2	Buffalo breeding periods and periods of sexual dormancy	Buffalo reproduction	Presentation/Lecture Method	mug, tankard, jug, ewer, cone
10th Grade	2				Exam
11th Grade	2	Recognize the symptoms of diseases and the importance of vaccines and treatments	The most important diseases of buffalo	Presentation	Coz and Attendees
12th Grade	2				Exam
Thirteenth	2				Exam
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			Buffalo Production/Course Milk Cattle Production Dr. Ahmed Al-Haj Taha Saleh, Akram Thanoun Younis and Mahmoud Rashed Al-		

	Rashed Milk Cattle Production
Key References (Sources)	Farm Animal Management Sastre N.SR and Thomas .Yeah.كي
Recommended books and references (scientific journals, reports...)	Animal physiology Prof. Dr. Jamal Al-Din Abdul Rahim Dr. Samir Zaki Al-Zarkouni Local Farm Animals in Iraq Dr. Mossadeq Delphi Ali
Electronic references, websites ,.....	

Course Description Form

1- Course Name: English Language 4	
2-CourseCode	
3- Semester / Year: - Spring Semester/Year 2025	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total)	
7. Name of the course administrator (if more than one name is mentioned)	
Dunia Mohi Mohsen	Email:
8. Course Objectives	
Course Objectives	6- The student should get acquainted with the concept of the English language 7- The student should learn about the ways of expressing the English language 8- The student should know the rules of the English language 9- The student should describe the types of English language 10- To know how to use the English language
TEACHING AND LEARNING STRATEGIES	
Strategy	1- Explanation and clarification 2- Method of in-person lecture

	3-4-	Student groups, conversations and observations Method of self-learning and writing scientific reports			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	The student should get acquainted with the concept of the English language	Reviewing times	Explanation and presentation of the model and lecture	Exam:
2	1	The student should get acquainted with the sources of the English language	English in agriculture(reading4)	Explanation and presentation of the model and lecture	Exam:
3	1	The student should learn about the types of English .	Exercise (reading 4)	Explanation and presentation of the model and lecture	Exam:
4	1	The student should know the rules of the English language.	Exercise (reading 4	Explanation and presentation of the model and lecture	Exam:
5	1	The student should know the basics of the English language.	scientific subject (preparatory reading).	Explanation and presentation of the model and lecture	Exam:
6	1	Language Practice	First Month Exam	In-Person	Comprehensive questions about lectures + reports
7	1	The student should know the times of the English language.	Studying the scientific term	Explanation and presentation of the model and lecture	Exam:
8	1	The student should learn how to express sentences in English.	Studying the scientific term	Explanation and presentation of the model and lecture	Exam
9	1	The student should learn how to express sentences in English.	English in agriculture	Explanation and presentation of the model and lecture	Exam:
10	1	The student should learn how to express sentences in English.	Legal Translation into Arabic	Explanation and presentation of the model and lecture	Exam
11	1	The student should learn how to express sentences in English.	Legal Translation into Arabic	Explanation and presentation of the model and lecture	Exam
12	1	The student should learn how to express sentences in English.	Re-reading for mor	Explanation and presentation of the model and lecture	Exam
13, 14	2	The student should learn how to express sentences in English.	Re-reading for mor	Explanation and presentation of the model and lecture	Exam
15	1	The student should learn how to express sentences in English.	Second Month Exam	Explanation and presentation of the model and	Comprehensive questions about the lecture +

				lecture	reports
Course Evaluation					
Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.)					
learning and teaching resources;					
Required textbooks (methodology if any)			English in Agriculture Introduction to English		
Key References (Sources)			Study/ teams of Saudi professional/ Ahmed Othman Review Victor Sahab, The Arab World Languages (King Abdulaziz Center for World Culture,an initiative of Saudi Aramco) 4 Study/ teams of Saudi professional/ Ahmed Othman/ Review of Victor Sahab, Arabic in World Languages)		
Recommended books and references (scientific journals, reports...)			Iraqi academic scientific journals		
Electronic references, websites ,.....			Journal English lan.		