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

Description of the Academic Program and Course

Department of Animal Production College of Agriculture/ University of Missan

For the academic year 2024/2025.

Introductio

Academic programs and courses are the cornerstone of the higher education system, forming the basis for the development of students' skills and knowledge in various specialized fields. The description of the academic program and course of study provides a detailed framework outlining the educational objectives and academic content to be taught, as well as the criteria by which students' performance will be evaluated.

The description of the academic program also provides a comprehensive view of what they can expect from their academic career, from the prerequisites for entry into the program to the career opportunities available after graduation. Courses are addressed as core parts within this framework, where each course is defined by its objectives, content, and evaluation methods, helping students understand what will be taught and how to achieve academic success.

This guide includes a description of the academic program in light of the latest developments in the educational system in Iraq. In this regard, we can only emphasize the importance of writing a description of academic programs and courses to ensure the proper functioning of the educational process.

University : University of Missan

College /Institute : College of Agriculture

Scientific Section: Animal Production

Date the file was filled out:

Signature:	**Signature**:
Name of the head of the department: Ass. Prof. Dr. Qusay Hattab Madhi	**Name of the scientific assistant**: Ass. Prof. Dr. Ahmed Malik Juma
Date : / / 2025	Date : / / 2025

File reviewed by the Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance Division

Date:

Signature:

Saleh Abdulhasan Ghailan

Approval of the Dean:

Dhuryan S. K

1- Vision the program

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

2- Program Mission

Providing a distinguished and multidisciplinary education that keeps pace with global developments, contributes to the preparation of 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. **Educating and training students on the latest practices in the field of livestock production.**
2. **Provide the necessary knowledge and skills to deal with animals and improve their productivity.**
3. **Promote scientific research in areas such as animal nutrition, care, and reproduction.**
4. **Develop programs to manage farms and improve productivity.**
5. **Enhance students' understanding of professional ethics in livestock production.**
6. **Encourage interaction with industry and the local community to improve livestock production applications.**
7. **Enhancing interaction with the natural environment and preserving livestock.**
8. **Provide experiential and applied educational opportunities for students in areas such as animal reproduction and care.**
9. **Enhance knowledge of modern techniques in farm management and improve animal health care.**
10. **Developing students' abilities in assessing the impact of environmental and economic factors on livestock production.**

Accreditation
N/A

5. Other external influences
Ministry of Higher Education and Scientific Research

6. Program Structure				
Program Structure	Number of Items	Study unit	Percentage	Notes*
Enterprise requirements	12	22	12.79	Basic
Faculty Requirements	22	71	41.27	Basic
Department Requirements	27	79	45.94	Basic
SUMMER TRAINING:				Basic
Other				

Program Description				
Year/ Level	Course Code	Course Name	Credit Hours	
			Theoretical	Practical
The first level first semester	UM 102	English (1)	**1**	**-**
The first level first semester	UM 104	Democracy and Human Rights	**1**	**-**
The first level first semester	ANPR123	Principles of Animal Production	**2**	**3**
The first level first semester	ANCH121	Analytical chemistry	**2**	**3**
The first level first semester	STAT124	Mathematics	**2**	**-**
The first level first semester	ZOOL126	Zoology (n.)	**2**	**3**
The first level Second semester	UM 103	Computer Applications (1)	**2**	**3**
The first level Second semester	DOBR112	Poultry (n.)	**2**	**3**

The first level Second semester	PLPR122	Principles of Plant Protection	**2**	**3**
The first level Second semester	ORCH125	Organic chemistry	**2**	**3**
The first level Second semester	FICR115	Principles of Field Crops	**2**	**3**
The first level Second semester	UM 105	Arabic Language	**1**	**-**
The Second level first semester	BICH251	Biochemistry	**2**	**3**
The Second level first semester	PRFI244	Principles of ichthyology	**2**	**3**
The Second level first semester	PRHS243	Principles of Horticulture	**2**	**3**
The Second level first semester	PAEX248	Principles of Agricultural Extension	**1**	**-**
The Second level first semester	PRMB252	Microbiology	**2**	**3**
The Second level first semester	AGMM249	Animal Production	**2**	**3**
The Second level first semester	UM 213	Computer Applications (1)	**2**	**3**
The Second level first semester	UM 216	crimes of the Baath Party regime	**1**	**-**
The Second level first semester	HPA218	Animal products	**2**	**3**
The Second level Second semester	242	Principles of Inheritance	**2**	**3**
The Second level Second semester	FOCP246	Fodder and pasture crops	**2**	**3**
The Second level Second semester	FIBP245	Breeding and production of fish	**2**	**3**
The Second level Second semester	PRPD240	Principles of Dairy Science	**2**	**3**
The Second level Second semester	PAEC247	Principles of Agriculture Economics	**2**	**-**
The Second level Second semester	UM 223	Computer Applications (1)	**2**	**3**
The Second level Second semester	UM 222	English (2)	**1**	**-**
The Second level Second semester	UM 224	Freedom and Democracy	**1**	**-**
The third level first semester	ANPH317	Animal Physiology	**2**	**3**
The third level first semester	HAHM322	Hatching and hatch management	**2**	**3**
The third level first semester	ANNU314	Feeding an animal	**2**	**3**
The third level first semester	ECAP321	Animal Production	**2**	**-**
The third level first semester	ANEB320	Animal Environment and Behavior	**2**	**-**
The third level first semester	DAAE319	Design and analysis of agricultural experiments	**2**	**3**
The third level	MEVI318	Medical and Veterinary Insects	**2**	**3**

first semester				
The third level second semester	POPH316	Poultry	**2**	**3**
The third level second semester	PPTE315	Poultry Products Technology	**2**	**3**
The third level second semester	FERA321	Fodder and Feedstuffs	**2**	**3**
The third level second semester	ANDI323	Animal diseases	**2**	**3**
The third level second semester	REPH317	Reproductive Physiology	**2**	**3**
The third level second semester	POBA322	Raising and improving an animal	**2**	**3**
The third level second semester	UM 322	English (3)	**1**	**-**
The fourth level first semester	POBN445	Poultry	**2**	**3**
The fourth level first semester	POBR452	Breeding and improving poultry	**2**	**3**
The fourth level first semester	SHGP443	Production of sheep and goats	**2**	**3**
The fourth level first semester	MEPR446	Production of meat livestock	**2**	**3**
The fourth level first semester	POPR441	Management and production of poultry	**2**	**3**
The fourth level first semester	PAMA451	Rangeland Management	**2**	**3**
The fourth level second semester	PODI450	Poultry diseases	**2**	**3**
The fourth level second semester	MOBI449	Molecular Biology	**2**	**3**
The fourth level second semester	DACP448	Production of milk cows	**2**	**3**
The fourth level second semester	MTSC447	Meat science	**2**	**3**
The fourth level second semester	BUPR442	Buffalo production	**2**	**3**
The fourth level second semester	UM 422	English	**1**	**-**

Relevant Learning Outcome	
Knowledge	
1. Deep understanding of agricultural legislation and practices	Students learn about legislation and standards regulating the animal production industry, including food safety and animal welfare.
2. Knowledge of animal species and their ecosystems	Deep understanding of different animal species and their natural environments, and how these factors affect their health and productivity.

3. Technology in Animal Production	The use and application of modern technology in improving animal productivity, such as artificial insemination and feed management techniques.
4. Farm Management and Strategic Planning	Learn how to efficiently manage farms, including production planning, and manage human and financial resources.
5. Assessment and Consultancy in Livestock Production	Develop skills in performance evaluation and consulting to improve animal productivity and quality.
6. Scientific research and practical applications	Developing capabilities in conducting scientific research and applying research results in practical work.
7. Sustainability and Sustainable Development	Understand the basics of sustainability in livestock production and how to apply sustainable practices in everyday work.
8. Economic Analysis and Assessment	Develop skills in analyzing economic data and evaluating the economic aspects of livestock production.
Skills	
1. Management and leadership skills	Students' ability to efficiently manage farms and organize livestock production processes, including production planning and human resource management.
2. Skills of analysis, synthesis and evaluation;	Ability to analyze data and evaluate the performance of livestock production operations, and make strategic decisions based on data and analytics.
3. Communication Skills	Ability to communicate effectively with various stakeholder groups, including farmers, agricultural sector workers, and government agencies.
4. Innovation and creativity skills	Ability to develop new and innovative solutions to improve animal productivity and enhance the effectiveness of agricultural operations.
5. RESEARCH SKILLS	Ability to design and implement scientific research in the fields of animal production, and apply research results in practical work.
6. Negotiation and Problem Solving	Ability to negotiate and solve complex problems facing livestock production processes effectively and innovatively.
7. Sustainability and Sustainable	Ability to apply sustainable agricultural practices and improve the environmental and economic

Development Skills	performance of farms.
8. Technology skills	Ability to use technology and computing tools in improving and managing livestock production processes.
Values	
1. Respect and Vital Care	Deep respect for animals and adherence to global biocare standards, with a focus on animal health and well-being.
2. Environmental sustainability	Commitment to sustainable agricultural practices that preserve the environment and support the sustainable development of natural resources.
3. Integrity and Professional Ethics	Adhere to high ethical standards in all aspects of work in the field of livestock production, including research and dealing with customers.
Innovation and continuous development.	Seeking to innovate and improve agricultural processes through the application of modern technologies and new ideas.
Continuous learning & development	Prepare for lifelong learning and develop personal and professional skills to maintain enduring competitiveness and success.
Collaboration and Teamwork.	Ability to work as part of a team and collaborate with colleagues and specialists in related fields to achieve common goals.
7. Professionalism and Dedication	Commitment to professionalism in all aspects, from dealing with customers to project management and dealing with crises.
8. Diversity and respect for different cultures	Appreciation and respect for cultural and social diversity and the ability to interact effectively with people from different backgrounds.

9. Teaching and learning strategies	
1. Active Learning	By encouraging students to participate in interactive learning activities such as discussions and practical activities.
2. Cooperative learning	By organizing students in groups to work on joint projects and solve problems, which enhances their learning by interacting with each other.
3. Problem Learning	Present real problems and challenges that students have to solve using the acquired knowledge and skills.
4. Self-learning	Enhancing students' abilities to develop their personal skills for learning and independence.
5. Project-based learning	Organizing practical projects from which students learn how to apply theoretical concepts in practical contexts.
6. Learning by experience	Providing practical and experiential learning opportunities that enhance students' understanding of the subjects.
7. Technology in Learning	Use technology to promote effective and engaging interaction and delivery of educational content.
8. Holistic Evaluation	Use diverse and ongoing assessment methods to measure students' progress and understanding of topics.

Evaluation methods

1. Daily exams (cobs)
2. Monthly exams
3. Practice-based exams
4. Practical and Theoretical Final Exams
5. Assessment through summer training in government departments by providing the student with a detailed report of the knowledge and skills acquired during the training

teaching personnel.

Faculty Members:

Academic rank	Specialization:		Special Requirements/Skills (if applicable)		teaching personnel.	
	Public	Private			Angel	Lecturer (n.)
Assistant Professor	Plant protection	Plant diseases			1	
Assistant Professor	Fish and marine wealth	Fish and marine wealth			1	
Assistant Professor	Soil science and water resources	Soil Physics			1	
Teacher	Animal Production	Animal Production			1	
Teacher	Gardening	Horticulture and Palms			2	
Assistant professor	Animal Production	Animal Production			3	
Assistant professor	Life Sciences	Microbiology			1	
Assistant professor	Life Sciences	Public animal			1	
Assistant professor	Field Crops	Field Crops			1	
Assistant professor	Life Sciences	Life Sciences			1	

Professional Development	
Orientation of new faculty members	
Improving teaching methods, making them more effective, conducting research and serving the community	
Professional development for faculty members	
1. Workshops and Training Courses	Organized to update knowledge and skills in areas such as agricultural technology, farm management, and scientific research.
2. Participate in many scientific conference and panels	An opportunity to share experiences and knowledge with other livestock researchers.
3. Supporting research and scientific projects	Provide resources and funding to support advanced research in critical areas related to livestock production.
4. Distance Learning and Technology in Education	Learn to use technology in education and research, including the use of distance learning platforms and modern technological tools.
5. Supervision and Mentoring	Supporting and guiding new faculty members and encouraging them to achieve academic and professional success.
6. Academic outreach and partnerships	Enhancing cooperation with other universities and institutions at a local and international level to exchange knowledge and experiences.
7. Evaluation and development of academic programs	Participate in the development and improvement of curricula to meet the needs of the labor market and society.
8. Scientific publishing and contribution to research	Encourage members to publish in high-impact scientific journals and participate in joint research projects.

12. Acceptance Criterion
central

The most important sources of information about the program
1. 1- Curriculum books. 2. Electronic copies of books and periodicals 3. Scientific reports in the field of animal production 4. Scientific publications and research issued by discreet universities

h. Program Development Plan	
1. Status assessment	Conduct a thorough evaluation of the current livestock production program, including an analysis of academic performance, a review of curricula and programs, and a survey of student and faculty opinions.
2. Identify strategic priorities	Identify specific objectives to be achieved through the development process, such as improving the quality of education, promoting scientific research, and enhancing interaction with industry.
3. Curriculum development and updating	Redesign and develop curricula to ensure they cover the latest knowledge and developments in livestock production.
4. Enhance Research and Innovation	Provide support for student and faculty research, and promote research projects that contribute to the development of sustainable agricultural practices and innovation in livestock production.

5. Enhance interaction with industry and society	Develop strategic partnerships with livestock production industries and the local community to enhance applied learning and training opportunities on the ground.
6. Developing the skills of the teaching staff	Provide training opportunities and workshops for faculty to improve teaching, research and management skills.
7. Performance evaluation and monitoring	Establish a continuous system for evaluating program performance and following up on the achievement of strategic objectives, making adjustments where necessary to improve performance.
8. Promotion & Marketing	Develop marketing strategies to attract potential students and enhance the reputation of the academic program at the industry and community level.
9. External rating	Seeking recognized academic accreditations to ensure the quality and professional standards of the livestock production program.

Curriculum skills chart																			
Please tick the boxes corresponding to the individual learning outcomes of the programmer you are applying for.																			
				Required learning outcomes of the program															
Year/ level	**Code/No.**	**Course Name**	**BASIC Optional Mother**	**KNOWLEDGE OBJECTIVES**				**Regard Learning ATSMS AFTH Program**				**emotional goals**				**Transferred General and Qualifying Skills (d) General and transferred skills (other skills related to employability and personal development).**			
				A1	**A2**	**A3**	**A4**	**B1.**	**B2**	**B3**	**B4**	**C1**	**C2**	**C3**	**A4:**	**D1**	**D2**	**D3**	**4D.**
First	UM 102	English (1)	**Basic**	✓	✓	✓				✓	✓	✓	✓			✓	✓		
	UM 104	Democracy and Human Rights	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANPR123	Principles of Animal Production	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANCH121	Analytical chemistry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	STAT124	Mathematics	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ZOOL126	Zoology (n.)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 103	Computer Applications (1)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DOBR112	Poultry (n.)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PLPR122	Principles of Plant Protection	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	ORCH125	Organic chemistry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FICR115	Principles of Field Crops	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 105	Arabic Language	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
second	BICH251	Biochemistry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PRFI244	Principles of ichthyology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PRHS243	Principles of Horticulture	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PAEX248	Principles of Agricultural Extension	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PRMB252	Microbiology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	AGMM249	Animal Production	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 213	Computer Applications (1)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 216	crimes of the Baath Party regime	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HPA218	Animal products	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 242	Principles of Inheritance	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	FOCP246	Fodder and pasture crops	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FIBP245	Breeding and production of fish	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PRPD240	Principles of Dairy Science	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PAEC247	Principles of Agriculture Economics	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 223	Computer Applications (1)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 222	English (2)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 224	Freedom and Democracy	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
third	ANPH317	Animal Physiology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HAHM322	Hatching and hatch management	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANNU314	Feeding an animal	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ECAP321	Animal Production	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANEB320	Animal Environment and Behavior	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	DAAE319	Design and analysis of agricultural experiments	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MEVI318	Medical and Veterinary Insects	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	POPH316	Poultry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PPTE315	Poultry Products Technology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FERA321	Fodder and Feedstuffs	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ANDI323	Animal diseases	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	REPH317	Reproductive Physiology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	POBA322	Raising and improving an animal	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 322	English (3)	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
forth	POBN445	Poultry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	POBR452	Breeding and improving poultry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	SHGP443	Production of sheep and goats	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MEPR446	Production of meat livestock	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	POPR441	Management and production of poultry	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PAMA451	Rangeland Management	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	PODI450	Poultry diseases	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MOBI449	Molecular Biology	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	DACP448	Production of milk cows	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MTSC447	Meat science	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	BUPR442	Buffalo production	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UM 422	English	**Basic**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**English language**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory**	
Module Code	**UM 102**			☐**Lecture**	
ECTS Credits	**2**			☐ **Lab**	
SWL (hr/sem)	**50**			☐ **Tutorial**	
				☐ **Practical**	
				☐ **Seminar**	
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**	Farhan.j@uomisan.edu.iq		
Peer Reviewer Name	None	**e-mail**	None		
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.

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	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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**	hussein.z@uomisan.edu.iq	
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 الدراسية 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

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	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

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 Texts	The concept of public freedoms and human rights, its 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**		**One**
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 الإرشادية والمحتويات التعلم ونتائج الدراسية 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. 3. Teaching students the role of successful management (human factor or the breeder himself) of small and large ruminant fields. 4. Spreading the culture of benefiting from animal by-products such as manure waste and animal waste, and benefiting from animals in work. 5. Identifying the types of farm animals and the most important projects related to their breeding. 6. Solving administrative problems in cattle, sheep, and goat breeding fields.

Learning and Teaching Strategies والتعليم التعلم استراتيجيات	
الاستراتيجيات:	1. Enabling students to think and analyze topics related to the intellectual framework of the Principles of Animal Production subject 2. Enabling students to think and analyze topics related to animal species and the most important projects related to their breeding. 3. Enabling students to think and analyze topics related to identifying administrative problems in animal fields and working to address them. 4. 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**		**One**
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..

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**		1
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)

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 #1, #2 , # 3 and #4, #5
	Assignments	4	15% (10)	2 , 6 , 10 , 12	LO #2, #3 and #4, #5
	on site Assignments	2	10% (10)	5 , 13	
	Report	1	10% (10)	15	LO #2, #3 and #4
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	**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 2015 الدكتور محمود مهدي البياتي والدكتوره دلال القاضي	Yes
Websites	Mathway | Algebra Problem Solver	

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**	**One**	
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

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

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 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	27	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب 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) المنهاج 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
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 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** ☐ **Seminar**	
Module Code	**DOBR112**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
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 مخرجات التعلم للمادة الدراسية	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. 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.

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	**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) المنهاج الاسبوعي للمختبر (الحقل **Filed**)	
	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 مخرجات التعلم للمادة الدراسية	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.
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** ☐**Seminar**	
Module Code	**ORCH125**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
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) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to organic chemistry - the most important bonds - hybridization - the possibilities of contributing resistance activities CC - the most important elements in organic chemistry
Week 2	Alkanes - their definition - naming - examples - Sp3 hybridization - rotational movement - preparation - reactions
Week 3	Alkenes - their definition - nomenclature - examples - Sp2 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 auratic 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
Week8	Lab8: 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

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	7
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	**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.**

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا		**Structured SWL (h/sem)** الحمل الدراسي المنتظم للطالب خلال الفصل	
Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا		**Unstructured SWL (h/sem)** الحمل الدراسي غير المنتظم للطالب خلال الفصل	
		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 (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	
Biochemistry	
2-CourseCode	
BICH251	
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. Eng. Sadiq Fanjan Hasnawi**	**Email: ridha84@uomisan.edu.iq**
8-Course Objectives	
Course Objectives	● **Introducing students to the basics of biochemistry** ● **Developing students' theoretical and practical skills regarding the cell and carbohydrates in its multiple sections** ● **Developing students' skills to distinguish between monosaccharides, disaccharides, polysaccharides, aldehydes and ketones** ● **Introducing students to proteins and fats and their various sections**

9- TEACHING AND LEARNING STRATEGIES	
Strategy	**1- Presentation of courses using pictures and illustrations that facilitate the student's understanding of the subject** **2- Training students to conduct laboratory tests 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 the cell and the important parts that make up the cell**	Introduction - Cell	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Level 2	**5**	**Introducing students to carbohydrates and their various sections**	Carbohydrates - Definition - Sections	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
third	**5**	**Introducing students to the most important monosaccharides**	The monosaccharides are…	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

Fourth	**5**	**Introducing students to low polysaccharides**	Low polysaccharides	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fifth	**5**	**Introducing students to polysaccharides**	Polysaccharides	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Six	**5**	**Introducing students to amino acids**	Introduction to amino acids – their sections – their reactions	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Seven	**5**	**Introducing students to the departments of essential and non-essential amino acids**	Departments of amino acids and their reactions	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

Eighth	**5**	**Introducing students to proteins and their importance**	Proteins – their composition – construction – their sections	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Nine	**5**	**Introducing students to the structure, construction and divisions of proteins**	**Composition, construction and divisions of proteins**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
10th Grade	**5**	**Introduces students to saturated and unsaturated fatty acids and their interactions**	Fatty acids – their divisions – their reactions	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
11th Grade	**5**	**Definition of Students** With simple peptides, their composition and sections	Simple peptides – their composition – their sections	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

12th Grade	**5**	**Introducing students to compound and derivative lipids**	Composite and derivative lipids - their composition – their sections	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Thirteenth	**5**	**Introducing students to the importance of nucleic acids**	& Blocks	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fourteenth	**5**	**Introducing students to the departments of nucleic acids and their composition**	The importance of nucleic acids, their divisions and composition	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fifteenth	**5**	**Introducing students to enzymes and the factors affecting them**	Enzymes, their characteristics , factors affecting them	**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)	**Hassan , Ali Mohammed and Shihab , Saad Khalil . Agricultural Biochemistry University of Baghdad Iraq Biochemistry Dr. Sami Al-Muzaffar**
Key References (Sources)	**Fundamentals of Biochemistry Dr. Jassim Jandal**
Recommended books and references (scientific journals, reports...)	**Introduction to Biochemistry Dr. Khawla Ahmed**
Electronic references, websites ,.....	**https://www.scribd.com/document/491738379**

Course Description Form

1. Course Name: Principles of Ichthyology
2. Course Code: PRFI244
3. Semester / Year: Spring semester 2024
4. Description Preparation Date: 2024/4/1
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: Ass. Lec. MOhammad Hato Muhammad	Email: bigland.station@yahoo.com

8. Course Objectives

Course Objectives	•Developing students' understanding of ichthyology and its branches. • Enhancing students' awareness of the importance of fish as an economically valuable animal resource.

9. Teaching and Learning Strategies

Strategies	Encouraging students to contribute to the preservation of fish resources.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**5**	Fish development, basic forms, and external appearance	Definition of ichthyology and its relationship to other sciences	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
2	**5**	Embryology	Introducing the student to the importance of studying embryology	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
3	**5**	Larval development	Enabling the	Lectures	Exams, daily

			student to follow the development of larvae	Theoretical and practical Presentation + methods Dialogue and + discussion	and monthly tests, final tests, and daily reports
4	**5**	Food and nutrition	Building an understanding of the importance of nutrition	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
5	**5**	Cytoplasm	Defining cytoplasm and its components	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
6	**5**	Reproduction	Explaining methods of reproduction and their packaging in practical life	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
7	**5**	Water survey	Introducing the student to the importance of building a database on fish resources	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
8	**5**	Water improvement	Utilizing data to improve environmental conditions for fish	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
9	**5**	Environmental pollution	Guiding the student to preserve the fish environment	Lectures Theoretical and practical Presentation + methods Dialogue and + discussion	Exams, daily and monthly tests, final tests, and daily reports
10	**5**	Fish populations	Giving an understanding of fish species and their habitats	Lectures Theoretical and practical Presentation + methods Dialogue and +	Exams, daily and monthly tests, final tests, and daily reports

				discussion	

11. Course Evaluation

Daily exams with multiple-choice questions that require scientific skills**.**
-Daily exams with scientific questions**.**
-Participation grades for competitive questions on academic topics**.**
-Grading for homework and reports**.**
- Grades for student activity during class and their commitment to regular attendance and absence.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Ichthyology: Dr. Hashem Abdel Razzaq Ahmed Fish Biology: Dr. Hashem Abdel Razzaq Ahmed
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

Course Name: **Principle of Horticulture**
Course Code:
Semester / Year: **2023- 2024**
Description Preparation Date: **24- 4 - 2024**
Forms of Attendance:
Number of Studying Hours (Total) / Number of Units (Total)
urs (2 theoretical + 3 practical) *15 weeks 75
Course Administrator's Name (mention all, if more than one name)
me: Dunya Mohi Mohsin

Course Objectives	
urse Objectives	**-The student must be familiar with the science of fruits and palm trees and methods of their reproduction** **-The student must be familiar with the science of vegetable crops and their production methods** **-The student must be familiar with the science of ornamental plants and methods of their propagation** **-The student must be familiar with the science of garden engineering and methods of its implementation** **-He has knowledge of methods of breeding and improving horticultural plants** **- He has knowledge of other sciences, such as physiology, fruit storage, anatomy, and plant classification**
Teaching and Learning Strategies	
rategies	**-Explanation and clarification using methods** **-Direct dialogue with students by asking** **-Student collections, homework, and writing reports** **-Practical lessons in agricultural fields** **-Scientific trips to learn about the most important fodder crops grown in Iraq** **-Self-learning method**

. Course Structure

eek	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Knowledge of the history and development of horticulture	Introduction to the history of horticulture	Lecture, discussion, reports, laboratories, practical in the fields	
2	5	Learn how horticultural	Methods of	Lecture,	

Course Description Form

1. Course Name: Principles of Agricultural Extension
2. Course Code: AGEC129
3. Semester / Year: Spring semester 2024
4. Description Preparation Date: 2024/4/1
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: Dr. Alaa Kazem Farhan	Email: alaa.k.f@uomisan.edu.iq

8. Course Objectives

Course Objectives	1. Introducing students to the importance of agricultural extension in the agricultural process. 2. Introducing rural leadership and its role in transferring the new from modern sciences and using them in the agricultural process. 3. Introducing students to the tasks performed by the agricultural advisor. 4. Introducing students to rural leaders and their role in the agricultural extension process. 5. Introducing students to the categories of adopters of agricultural innovations. Introducing students to the methods used to introduce the new innovations that serve the agricultural process.

9. Teaching and Learning Strategies

Strategies	The main strategy that will be adopted in offering this module is to encourage students' participation in discussion and lectures, while at the same time improving and expanding their critical thinking skills. This will be achieved through classrooms where learning takes place through classroom lectures, participation in lecturing, and snap, semester and final exams.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2**	Introduction to Agricultural Extension	Definition of Agricultural Extension	Class lecture	Questions during the lecture
2	**2**	The Agricultural Extension Worker...Who is he and what are his roles؟	Definition of the Agricultural Extension Worker and His Importance in the	Class lecture	Questions during the lecture

			Agricultural Process		
3	**2**	Rural Leadership	Rural Leadership and Its Importance in the Agricultural Extension Process	Class lecture	Questions during the lecture
4	**2**	Principles and Objectives of Agricultural Extension Work	General and Specific Objectives and Their Characteristics	Class lecture	Questions during the lecture
5	**2**	The Extension Communication Process and its Elements	Definition of Extension Communication and its Methods	Class lecture	Questions during the lecture
6	**2**	Factors Influencing the Extension Communication Process	Disruption - Social Class Differences	Class lecture	Questions during the lecture
7	**2**	First Month Exam	-	Class lecture	Questions during the lecture
8	**2**	New Agricultural Technology	Definition of New Agricultural Technology / Examples of Farm	Class lecture	Questions during the lecture
9	**2**	Extension Program Evaluation	Definition of Evaluation and Its Various Stages	Class lecture	Questions during the lecture
10	**2**	Extension Program Evaluation Journals	Evaluation of the Organizational Structure, Workers, Planning, Implementation, and Results	Class lecture	Questions during the lecture
11	**2**	Methods of Adopting Modern Ideas	Extension Methods / Types and Priorities	Class lecture	Questions during the lecture
12	**2**	Categories of Adopters of New Technologies	Types of Adopters	Class lecture	Questions during the lecture
13	**2**	The Position of Agriculture in the Economy and Its Role in Economic Development	The Role of Agricultural Extension in Developing Agriculture and	Class lecture	Questions during the lecture

			its Importance		
14	**2**	The Relationship of Agricultural Extension to Some Applied Science	Examples of Some Applied Sciences and Their Relationship to Agricultural Extension	Class lecture	Questions during the lecture
15	**2**	Second Month Exam	-	Class lecture	Questions during the lecture

11. Course Evaluation

First month exam: 20 points
Second month exam: 20 points
Daily surprise exams: 3 points
Subject-related report: 3 points
Extracurricular activities: 4 points
Final exam: 50 points

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Contemporary Agricultural Extension, Dr. Ahmed Mohamed / Faculty of Agriculture, Cairo .University Agricultural Extension, Dr. Ahmed Galal Awis / .Faculty of Specific Education, Cairo University
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Template

1- Course Title:	
Principles of Microbiology	
2- Course Code: DAIR240	
DAIR240	
3- Semester / Academic	
Year: 2024 – 2025 (Fall Semester)	
4 - Date of Course Description Preparation	
1 – 10 – 2024 **2024 –** 10 **– 1**	
5- Available Attendance Modes	
In-Person	
6- Total Study Hours / Total Units: 75	
hours (2 Theory + 3 Practical) * 15 Weeks	
7- Course Coordinator(s): (If more than one, mention all names	
Name**:** Dr. Abdul Ridha Ati Jaafar Asaad Shamil Atiyah	Email: ridha84@uomisan.edu.iq
8. Course Objectives	

● Introduce students to microbiology and its various species and types. ● Develop students' theoretical and practical skills to enable them to identify different types of microorganisms, whether harmful or beneficial. ● Enhance students' skills in various microbiological techniques and their applications in medical, industrial, and environmental fields.	Course Objectives

9. Teaching and Learning Strategies	
1- Presenting course materials using images and illustrative diagrams that facilitate students' understanding of the subject. 2- Training students in microbiological culturing of microorganisms to develop their skills in this field. 3- Conducting discussions and dialogues with students to enhance their self-confidence.	Strategy

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	A historical overview of microbiology and the scientists who contributed to its development.	Introducing students to microbiology and the most prominent scientists who significantly contributed to its development throughout history.	**5**	First
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Bacteria (Morphological traits and functional anatomy Fungi (Molds (and Yeasts	Introducing students to bacteria and fungi, and the most important shapes, genera, and species within them.	**5**	second

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Algae Viruses	Introducing students to algae and viruses, their way of life, and .reproduction	**5**	Third
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Pathogenic microorganisms	Introducing students to pathogenic .microorganisms	**5**	Fourth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Microorganisms in water and sewage water	Introducing students to microorganisms found in water and sewage .water	**5**	Fifth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Preservation of microbial cell cultures	Teaching students how to preserve microbial cell .cultures	**5**	sixth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Introduction to microbiology laboratory equipment	Introducing students to laboratory equipment used for detecting .microorganisms	**5**	seventh
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Preparation of culture media Sterilization	Teaching students how to prepare culture media and sterilization .methods	**5**	Eighth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Simple staining Differential staining (Gram staining Special staining (Spore staining	Teaching students different staining methods for microorganisms.	**5**	Ninth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of bacterial movement (hanging drop (method	Introducing students to drop hanging microscopy to detect bacterial movement.	**5**	Eleventh

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Counting microorganisms (Plate count (method	Teaching students how to count microorganisms using plate counting .methods	**5**	Twelfth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of fungi	Teaching students how to .examine fungi	**5**	Thirteenth

Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Water examination (is it suitable for human consumption or (not	Teaching students how to .examine water	**5**	Fourteenth
Daily and Monthly Reports and Exams	Theoretical Lectures Practical Lectures Presentation Methods Discussion and Dialogue	Examination of bacterial sensitivity to .antibiotics	Teaching students how to test microorganism sensitivity and resistance to .antibiotics	**5**	Fifteenth
11. course Evaluation					
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily and oral exams, monthly exams, written exams, reports, etc**.**					

12. Learning and Teaching Resources	
Microbiology: Translation by Wafa Jasim, Hassan Mohsen Ali, 1986, Mosul University. Introduction to Microbiology: Translation by Dr. Khudhair Dawood, Mazahim Qasim, Wael Yaseen, 1985.	Required Textbooks (Curriculum-based, (if available
Soil Microbiology: Ghiath Qasim, Mudhir Abdul-Sattar, 1989, Mosul University.	(Main References (Sources
Fungi: Dr. Ibrahim Aziz, Dr. Kaisar Najib. Microorganisms: Dr. Najm Al-Din Al-Sharabi and others, 2004, Damascus University	Recommended Supporting Books and References (Scientific Journals, Reports, (.etc
https://www.scribd.com/document/491738379	Electronic References, Websites

Course Description Form

1- Course Name	
Animal Production	
2-CourseCode	
AGMM249	
3- Term / Year / Term 1 – 2023 - 2024	
4-The date of preparing this description	
5- Forms of Attendance:	
6. Number of study hours (total) / number of units (total)	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Prof. Dr. Ali Abbas Hashem	
8- Course Objectives	
Course Objectives	• **Description of the forms of the devices, their types and the mechanism of their selection for the barns** • **Identify the types of poultry and poultry poultry p** • **Knowing the types of devices and mechanisms used in the barns and their mechanism of work and making the best use of them .** • **Providing students with a scientific background related to the development of modern mechanization and its general characteristics and how to benefit from it**
TEACHING AND LEARNING STRATEGIES	
Strategy	- Providing students with additional basics related to the outputs of thinking and analysis - Forming a fluffy group to discuss various agricultural topics - Asking reflective questions during lectures, such as(what, how, when and why) - Preparing students for homework that requires self-explanations in causal ways
10. Course Structure	

Week	**Hours**	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	**2**		Oh, my God. I know, it's outside the electric fence.	Take a look and show the slides	Daily Testing
Level 2	**2**		Gantt Chart	Take a look and show the slides	Daily Testing
third	**2**		Control of environmental conditions in animal sheds	Take a look and show the slides	Daily Testing
Fourth	**2**		Heating in animal barns	Take a look	Daily Testing
Fifth	**2**		Control and warning systems used in the ventilation system	Take a look and show the slides	Daily Testing
Six	**2**		Equipping agricultural buildings with water	Take a look and show the slides	Daily Testing
Seven	**2**		MILKING EQUIPMENT	Take a look and show the slides	Monthly Quiz
Eighth	**2**		Refrigeration appliances and their uses	Take a look and show the slides	Daily Testing
Nine	**2**		Wool Mowing Equipment	Take a look and show the slides	Daily Testing
10th Grade	**2**		Components of the electric wool cutting machine	Take a look and show the slides	Daily Testing
11th Grade	**2**		WASTE DISPOSAL	Take a look and show the slides	Daily Testing
12th Grade	**2**		Equipment, appliances and means used in moving waste	Take a look and show the slides	Daily Testing
Thirteenth	**2**		Hatcheries & Egg Filling Equipment	Take a look and show the slides	Daily Testing

Fourteenth	**2**		Treat eggs before placing them in hatcheries	Take a look and show the slides	Daily Testing
Fifteenth	**2**		Animal Slaughtering and Meat Processing Equipment	Take a look and show the slides	Monthly Quiz

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)	
Recommended books and references (scientific journals, reports...)	- **LIVESTOCK EQUIPMENT Written by Dr. Lutfi Hussein Mohamed Ali, Assistant Agricultural Mechanization Stadium, and Dr. Tawfiq Fahmy Damian, Associate Agricultural Engineering Stadium**
Electronic references, websites ,.....	

Course Description Form

1- Course Name	
Applications in Computer /3	
2-CourseCode	
COMA241	
3- Semester / Year: - Spring Semester/Year 2024	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total): - 30 hours (2 theoretical +practical) *15 weeks	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Eng. Abbas Luaibi Obaid	**Email: abbas.alrajhe@uomisan.edu.iq**
8. Course Objectives	
8. Course Objectives	**The basics of Excel - Excel** **Demonstrate how to use formulas and functions in Excel -** **A statement of how to prepare financial statements in Excel**
TEACHING AND LEARNING STRATEGIES	
Strategy	**1- Explanation, clarification and reduction of general and qualifying skills** **2 - Urging the student to write simple research towards the method of in-person lecture to create a state of balance between systematic information and source information**

	3- Urging the student to make practical projects on the calculator and to conduct discussions among students about the methodology of the subject and the distribution of students in the form of groups . **4- Practical lessons in the laboratory** **5- The method of self-learning and writing scientific reports and urging the student to evaluate the answer of his colleagues from other students to develop self-development .**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	**2**	**Identify the blindness of a program with an explanation** **of the bands, the effective bollards and the extent** **Cells, columns and rows**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Level 2	**2**	**Knowing the commands of the MMF list, which is memorizing** **and save as MMF and open and dark** **Al Mummim .....etc.)**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
third	**2**	**Know Page Menu Commands** **The main one is the clipboard and the font** **Format, merge and center cells**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fourth	**2**	**Knowledge of number formatting and page menu commands** **|||UNTRANSLATED_CONTENT_START|||الرئيسية) home|||UNTRANSLATED_CONTENT_END|||**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fifth	**2**	**Knowledge of patterns including formatting of tables, cells and home**	**Exceel**	**Hands-on lectures + live presentations**	**Daily, Monthly and Final**

		menu commands		**+ dialogue and discussion**	**Quizzes and Reports**
Six	**2**	**Knowing the editing order and including the sesame** **Digital, linear and scanning of depths** **Formats Home Menu Commands**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Seven	**2**	**Know Listing Orders Listing Orders Listing Orders** **Insert column**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Eighth	**2**	**Paper I - Prose**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Nine	**2**	**Introduction to charts, their types, how to create them and change their location Charts**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
10th Grade	**2**	**Knowing the ready-made functions and how to insert them, use them and audit**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
11th Grade	**2**	**Knowledge of sorting and filtering data and how to arrange data in ascending and descending order (data list commands)**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**

12th Grade	**2**	**Knowing how to put on a password** **and how to hide and show** **Depths as well as the method of presentation** **Sheet and Formula Bar Handling** **Freeze rows and columns, checklist commands (Reviw) and display (Viwe**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Thirteenth	**2**	**Knowledge of the rules of writing mathematical formulas Introduction to mathematical formulas**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fourteenth	**2**	**Knowledge of how to prepare financial statements Introduction to operations** **Value (F)**	**Exceel**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fifteenth	**3**	**Paper II**			

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 Book Four)	**Computer Basics and Office Applications Part II/ Microsoft Office 2010** **Ministry of Higher Education and Scientific Research** **Author: 1- Prof. Dr. Ghassan Hamid Abdul Majeed** **2-Prof. Dr. Ziad Mohamed Abboud** **3-Prof. Dr. Mohammed Nasser Al-**

	Tarafi **4-Prof. Dr. Safa Abis Al-Maamouri** **2. Internet**
Key References (Sources)	1.*Microsoft Excel 2010 Step by Step*(448 pages; Print ISBN: 978-0-7356-2691-1), by Joyce Cox and Joan Lambert, 2.Beginning Microsoft Word 2010, by T.Y. Anderson, Guy Hart-Davis Stephen Moffat, The Mouse Training Company
Recommended books and references (scientific journals, reports...)	**0. Explanation of the Excel program 0202 The book is in Arabic A full explanation of the program in the English interface with a practical exercise**
Electronic references, websites ,.....	Library Genesis Websites: - History of the development of computer networks, thematic website: http://mawdoo3.com http://youstaff.blogspot.com :Information and Internet Security http://geeklesstech.com : Internet Laws for Internet Use - - Internet Real-Time Communication Protocols (RTP SIP) technology world website. ARPANET logical map, http://russbellew.com/Documents/Arpanet_sep_1974. jpg

Course Description

1. Name of the course on the crimes of the Baath regime in Iraq					
2. Course code:					
3-semester/ year					
2024-2025					
4. Date of preparation of this description 18/9/2024					
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)					
Name: Hussein Zaghir Email:					
8. Course Objectives					
Course Objectives	To identify and view a set of crimes committed by the defunct and dissolved Baath Party against the Iraqi people and from various components of its spectrum and to establish an awareness of students to reject all forms of injustice and authoritarianism of these regimes and demand all civil and political rights				
TEACHING AND LEARNING					
Strategy	Lecturing and using the method of discussion and dialogue				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	One hour	The student was introduced to the crimes of Baathism in accordance with the law of the Iraqi Criminal Court	Baathist Crimes According to the Iraqi Criminal Court Law	Lecture	question and answer
2	One hour	To distinguish	The concept of crimes	Lecture	question and

		between the concept of crimes and their categories	and their categories		answer
3	One hour	To clarify the term and language	Definition of crime Language and terminology	Lecture	question and answer
4	One hour	To identify the sections of crimes	Crimes Sections	Lecture	question and answer
5	One hour	To learn about the types of international crimes	INTERNATIONAL CRIMES	Lecture and use the blackboard	question and answer
6	One hour	To get acquainted with the decisions issued by the Criminal Court	Decisions issued by the Criminal Court	Lecture and use the blackboard	question and answer
7	One hour	To identify psychological and social crimes and the most prominent violations of the Baath Party	Psychosocial crimes and the most prominent violations of the Baath Party	Lecture	question and answer
8	One hour	To identify psychological crimes	Psychological crimes		question and answer
9	One hour	To identify the mechanisms of psychological crimes	Mechanisms of psychological crimes	Lecture and use the blackboard	question and answer
10	One hour	To identify the effects of psychological crimes	Effects of Psychological Crimes	Lecture and use the blackboard	Oral examination
11	One hour	To identify social crimes	Social Crimes	Lecture	question and answer
12	One hour	To clarify the concept of the militarization of society	The militarization of society	Lecture	question and answer
13	One hour	To learn about the Baathist position on religion	The position of the Baath Party on religion	Lecture	question and answer
14	One hour	To identify violations of Iraqi laws	Violation of Iraqi laws	Lecture and use the blackboard	question and answer
15	One hour	To identify images of human rights violations	Images of human rights violations	Lecture	30% written exam
16	One hour	To identify some of the decisions of political violations	Some Political Violations Decisions	Lecture	question and answer

17	One hour	To know the places of prisons and detention	Places of Prisons and Detention	Lecture and use the blackboard	question and answer
18	One hour	To identify the environmental crimes of the Baath regime	Environmental Crimes of the Baath Regime	Lecture	question and answer
19	One hour	To identify war pollution	War Pollution	Lecture	question and answer
20	One hour	To learn about the destruction of cities and villages	Destruction of cities and villages	Lecture	question and answer
21	One hour	To learn about the draining of the marshes	Drainage of marshes	Lecture	question and answer
22	One hour	To learn about shoveling orchards	Shoveling orchards	Lecture	question and answer
23	One hour	To learn about mass graves	Mass graves.	Lecture and use the blackboard	question and answer
24	One hour	To learn about the events of the extermination cemeteries	Events of extermination cemeteries	Lecture	question and answer
25	One hour	To learn about the symbolic classification of extermination graves	Symbolic classification of extermination graves	Lecture	Oral examination

11. Evaluation ofthe course	
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)	Crimes of the Baath regime in Iraq
Key References (Sources)	Archive of the Political Prisoners Foundation
Recommended books and references (scientific journals, reports...)	
E-References , Websites	

Course Description Form

1- Course Name	
Principles of Inheritance	
Course Code**:**	
242	
3- Semester / Year: - Spring Semester/Year 2024	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6- Number of study hours (total) / Number of units (total): - 5hours (2theoretical and 3 practical) Number of units (3.5)	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Eng. Doaa Ali Hussein **Eng. Hamid Majeed**	**Email:**
8. Course Objectives	
Course Objectives	Graduating students who are able to : - Work in the field of genetic characterization of animals farm - Work on the study of farm animal breeds and the possibility of preserving it and enhancing its economic qualities - Helping students understand the courses and

	vocabulary of a lesson and animal genetics curriculum and learn about the history of genetics - Introducing livestock projects and focusing on Genetic aspects of the country Practical practice of the most important animal inheritance projects and conducting test taxes for a number of farm animals

TEACHING AND LEARNING STRATEGIES	
Strategy	This course is designed to suit the students of the second stage in the Department of Animal Production. In order to achieve The objective of this course is to study genetics in the study of biodiversity in animals and in the influence of genetic factors on various animals and examines how similarity and difference between animal species In terms of phenotypic and hereditary traits

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**5**	Introducing students to information about general genetics and the history of genetics.	General Introduction to Genetics	Lectures Theory: Practical	Examinations day Monthly
2	**5**	Study the definition of nucleic acids and methods of their synthesis and division	Nucleic Acids	Lectures Theory: Practical	Examinations day Monthly
3	**5**	Introducing the student to Mendel's laws (Law of	The principles of Mendelian genetics	Lectures Theory:	Examinations day

		Isolation and Autonomous Isolation)		Practical	Monthly
4	**5**	Students' definition of qualities Appearance of Animal	Types of Sovereignty	Lectures Theory: Practical	Examinations day Monthly
5	**5**	Explaining and clarifying the effect of the gene on the emergence of several phenotypic traits in one species	Multiple alleles	Lectures Theory: Practical	Examinations day Monthly
6	**5**	Introducing students to each other Affected phenotypic traits individual organism.	Gender Specific Qualities	Lectures Theory: Practical	Examinations day Monthly
7	**5**	Introducing students to the term genetic overlap, the meaning of fatal alleles, and the most important diseases that can cause humans and animals	Genetic interference and fatal alleles	Lectures Theory: Practical	Examinations day Monthly
8	**5**	Introducing the properties of the material Heredity at division	Full Engagement	Lectures Theory: Practical	Examinations day Monthly

9	**5**	Introducing students to a case Crossing over during development	Genetic Transit	Lectures Theory: Practical	Examinations day Monthly
10	**5**	Explanation of Quantitative Inheritance and Cartographic Distances in Chromosomal Digroup Objects	Chromosomal maps	Lectures Theory: Practical	Examinations day Monthly
11	**5**	Introducing students to the term genetic replication	Genetic Repeatability and Laws	Lectures Theory: Practical	Examinations day Monthly
12	**5**	Explanation of Maternal Influence and Cytoplasmic Inheritance	Cytoplasmic Inheritance	Lectures Theory: Practical	Examinations day Monthly
13	**5**	Introducing students to the meaning of the genetic code, gene expression and genetic control over protein synthesis	Board	Lectures Theory: Practical	Examinations day Monthly
14	**5**	Explain the difference in chromosomal structure	Chromosome	Lectures Theory: Practical	Examinations day Monthly
15	**5**	Introducing students to genetic mutations, their types and reasons for their occurrence	Mutations Genetic	Lectures Theory: Practical	Examinations day Monthly

Course Evaluation	
- Monthly and daily exams with scientific questions related to the subject. - Participation scores for competition questions for subjects . - Grading of homework and reports - Grades for the student's activity during the lecture and the extent of his commitment to attendance and absence	
learning and teaching resources;	
Required textbooks (methodology if any)	Adnan Hassan Mohamed(1982) Fundamentals of Inheritance . Dar Al-Kutub for Printing and Publishing .Mosul 1- Khaled Hamed Hassan (2017) Fundamentals of Genetics. Diyala University Republic of Iraq 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	
Fodder and pasture crops	
2-CourseCode	
FOCP246	
3-semester/ year	
2023 – 2024(Spring Semester)	
4-The date of preparing this description	
24/4/2024	
5. Forms of Attendance: Compact	
BUILT-IN	
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: Dounia Mohi Mohsen **Name : Ali Adnan**	
8. Course Objectives	
Course Objectives	**1-The material seeks to identify the importance of fodder crops and the methods of cultivating, managing, storing or cutting them** **2 - Includes knowledge of the types of fodder crops and their places of origin** **3- Knowing the processes related to soil service such as plowing, smoothing, leveling and dividing the land and irrigation channels** **4- Knowledge of the processes related to crop service, such as methods of planting,**

	appropriate quantities of seeds, fertilization and dates of tampon **5- Studying feed mixtures, their types and their importance in animal productivity** **6- Knowing the types of feed provided to the animal such as threshing and silage**

TEACHING AND LEARNING STRATEGIES	
Strategy	**1- Explanation and clarification** **Lecture method** **3- Student Totals** **4- Practical lessons in agricultural fields** **5- Scientific trips to learn about the most important fodder crops grown in Iraq** **6- Self-learning method**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	**2**	**Historical overview of fodder crops and some important terms for fodder crops**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Level 2	**2**	**The importance of fodder crops and the division and classification of fodder crops**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
third	**2**	**Economic importance and agricultural management of legumes, including jets**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Fourth	**2**	**Economic importance and**	**Fodder crops**	**Explanation, Model**	**Exam**

		agricultural management of the Egyptian clover crop		**Presentation and Lecture**	
Fifth	**2**	**The economic importance and agricultural management of Hartman, Handak and Kurt**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Six	**2**	**The economic importance and agricultural management of fodder cowpea crops and cloves**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Seven	**2**	**Economic importance and agricultural management of fenugreek, livestock and soybean crops**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Eighth	**2**	**Economic importance and agricultural management of grass crops, including barley and oats**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Nine	**2**	**Economic importance and agricultural management of maize and sorghum crops**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
10th Grade	**2**	**Economic importance and agricultural**	**Fodder crops**	**Explanation, Model Presentation**	**Exam**

		management of millet and Sudanese hashish crops		**and Lecture**	
11th Grade	**2**	**Feed mixtures – types – advantages and benefits**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
12th Grade	**2**	**Fodder Crop Breeding**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Thirteenth	**2**	**Feed Manufacturing - Al-Drees**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Fourteenth	**2**	**Feed Manufacturing - Silage**	**Fodder crops**	**Explanation, Model Presentation and Lecture**	**Exam**
Fifteenth	**2**	**Mechanization of fodder crop production**	**Fodder crops**	**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)			**1 Fodder and pasture crops. Dr. Ramadan Ahmed Al-Tikriti and Dr. Tawakkol Younis Rizk and Dr. Hikmat Askar Al-Roumi.** **2- Recent articles from the Internet, specialized scientific fields, the Iraqi**		

	Journal of Agricultural Sciences, and the Virtual Library. **1-The field crops _ principles and a practice** **2-Agronomy journal.** **3. Websites, Articles, FAO reports**
Key References (Sources)	**1. Field crop production. Abdul Majeed Al-Ansari.** **2- Cultivation and exploitation of fodder. Mahdi Abdul Latif Al-Tamimi .** **3- Fodder crops. Nasser Hussein Safar .** **- 4 recent articles from the Internet, specialized scientific fields and a magazine** **Agricultural Sciences - Iraq and the Virtual Library.** **Forage crops, Agriculture Canada-5**
Recommended books and references (scientific journals, reports...)	**Iraqi academic scientific journals**
Electronic references, websites ,.....	**crop Science Society Of America Library Genesis**

Course Description Form

1- Course Name	
Breeding and production of fish	
2-CourseCode	
FIBP245	
3-semester/ year	
Semester II 2023-2024	
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)	
5 hours (2theoretical and 3 practical) Number of units (3)	
7. Name of the course administrator (if more than one name is mentioned)	
Eng. Mohamed Hato Mohamed	Email: bigland.station@yahoo.com
8. Course Objectives	
Course Objectives	• Introducing the importance of name breeding projects • Directing students to fish farming systems in the world. • Highlighting the economic value of fish farming projects.
TEACHING AND LEARNING STRATEGIES	
Strategy	Motivating students to establish fish breeding projects

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	5	Comparison between fish farming and raising other animals	The history of fish farming and its advantages compared to the breeding of other farm animals.	Lectures Theoretical and Practical ~Width	Exam Tests Daily and Monthly Final and Reports day

				+Dialogue and Discussion	
Level 2	5		Fish Breeding Systems	Lectures Theoretical and Practical ~Width +Dialogue and Discussion	Exam Tests Daily and Monthly Final and Reports day
third	5		Construction of earthen basins	Lectures Theoretical and Practical ~Widthscussion	Examinations Daily and Monthly Final and Reports day
Fourth	5		Raising in a floating cage	Lectures Theoretical and Practical	Examinations Daily and Monthly Final and
Fifth	5		Physical and chemical qualities of water	Lectures Theoretical and Practical ~	Examinations Daily and Monthly
Six	5		Aquaculture in aquaculture	Lectures Theoretical and Practical ~Width +Dialogue and Discussion	Examinations Daily and Monthly Final and Reports day
Seven	5		Water Jungle Control	Lectures Theoretical and Practical ~Width	Examinations Daily and Monthly Final and Reports day

				+Dialogue and Discussion	
Eighth	5		Reproduction and artificial insemination	Lectures Theoretical and Practical ~Width +Dialogue and Discussion	Exam Tests Daily and Monthly Final and Reports day
Nine	5		Fish Diseases	Lectures Theoretical and Practical	Exam Tests Daily and Monthly
10th Grade	5		Ornamental fish breeding technician	Lectures Theoretical and Practical ~Width +Dialogue and Discussion	Examinations Daily and Monthly Final and Reports day

Course Evaluation
Daily exams with multiple-choice questions that require scientific skills. - Daily exams with scientific questions. - Participation scores for competition questions for subjects . - Grading of homework and reports - Grades for the student's activity during the lecture and the extent of his commitment to attendance and absence.
learning and teaching resources;

Required textbooks (methodology if any)	Fish breeding Dr. Najm Qamar Al-Daham Basics of Fish Breeding Dr. Hussein Ali Mahfouz

Course Description Form

1- Course Name	
Principles of Dairy Science	
2-CourseCode	
PRPD240	
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. Dr. Abdul Redha Aati Jaafar** **No. Eng. Sadiq Fanjan Hasnawi**	**Email: sadiq.fanjan@uomisan.edu.iq**
8. Course Objectives	

Course Objectives	● **Introducing students to the components of milk and the high nutritional value that makes it an important product in terms of nutrition, health and economy** ● **Developing theoretical and practical skills for students that enable them to detect milk adulteration** ● **Developing students' milk processing skills such as cheese making, fermented milk, butter, milk sorting, milk ice cream and others** ● **Teaching students how to preserve milk from contamination by pathological microorganisms**

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 dairy 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**	**Enabling students to conduct tests for milk components**	**Screening for milk ingredients**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Level 2	**5**	**Introducing students to the chemical components of milk**	**Chemical Coposition**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

third	**5**	**Introducing students to the most important factors affecting milk production**	**Factors affecting milk production**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fourth	**5**	**Introducing milk proteins to students**	**Milk Proteins**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fifth	**5**	**Introducing students to fats and fatty acids in milk**	**Milk fat, fat microscopy and fat percentage estimation (Babcock and Kerber)**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Six	**5**	**Introducing students to how to estimate the pelvis in milk**	**Estimation of acidity in milk**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

Seven	**5**	**Teaching students how to detect milk adulteration**	**Specific weight and adulteration of milk**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Eighth	**5**	**Introducing students to the most important salts and vitamins in milk**	**Salt and Milk Vitamins**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Nine	**5**	**Introducing students to methods of sorting milk and factors affecting buttermilk**	**Sorting milk, making butter and factors affecting milking**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
10th Grade	**5**	**Introducing students to the microbiology of milk**	**Microbiology in Milk**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

11th Grade	**5**	**Introducing students to cheese making methods**	**Cheesemaking**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
12th Grade	**5**	**Teaching students to make ice cream**	**Making Milky Ice Cream**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Thirteenth	**5**	**Introducing students to the qualitative control of milk**	**Quality control of milk received**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**
Fourteenth	**5**	**Introducing students to dairy laboratories**	**Milk treatment in dairy factories**	**Theoretical lectures** **Practical lectures** **Rendering methods** **Discussion and dialogue**	**Daily and monthly reports .**

Fifteenth	**5**	**Introducing students to the thermal coefficients of milk**	**Milk Heat Treatments**	**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)	**General Dairy Principles Book by Dr. Mohsen Al-Shabibi, Dr. Nizar Shoukry, Dr. Sadiq Jawad Tohme, and Dr. Hayalin Hammadi Ali 1999**
Key References (Sources)	**General Dairy Principles Gamal Abdel Tawab**
Recommended books and references (scientific journals, reports...)	**Principles of Dairy Ramzi Abdul Rahman** **The book of principles of milk is damaged by Dr. Mohsen Al-Shabbaa and others**
Electronic references, websites ,.....	https://www.scribd.com/document/491738379

Course Name
Principles of Agriculture Economics
2-CourseCode
PAEC247
3- Semester / Year / Semester 2 – 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 the agricultural economy in the agricultural process.** • **Informing the student about the distribution of agricultural resources on their alternative uses.**

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**	**Overall Economy**	**Economics**	**Classroom lecture**	**Questions during the lecture**
Level 2	**2**	**Agronomy**	**Definition and Importance of Agricultural Economics**	**Classroom lecture**	**Questions during the lecture**
third	**2**	**Concept of Modernized Agriculture Farming**	**Agriculture and its characteristics**	**Classroom lecture**	**Questions during the lecture**
Fourth	**2**	**Farm Business Management**	**Objectives of Farm Business Study**	**Classroom lecture**	**Questions during the lecture**

Fifth	**2**	**Agricultural economic activity and its components**	**The main pillars of agricultural economic activity**	**Classroom lecture**	**Questions during the lecture**
Six	**2**	**James. Ranch foreman.**	**Farm Definition** **Farm Manager Jobs**	**Classroom lecture**	**Questions during the lecture**
Seven	**2**	**Farm projects**	**Definition of projects and their types from a competitive and functional point of view**	**Classroom lecture**	**Questions during the lecture**
Eighth	**2**	**Month 1**	**_____**		
Nine	**2**	**agricultural output.**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**
10th Grade	**2**	**Human needs and agricultural economic resources**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**
11th Grade	**2**	**Price elasticity of demand**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**
12th Grade	**2**	**elasticity of demand**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**

Thirteenth	**2**	**elasticity of demand**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**
Fourteenth	**2**	**Law of diminishing return**	**Classroom lecture**	**Classroom lecture**	**Questions during the lecture**
Fifteenth	**2**	**Second month**	**_____**		

Course Evaluation
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)	**Economics of Agricultural Resources, d. Hamed Abdel Shafi/Faculty of Agriculture - Mansoura University.**
Recommended books and references (scientific journals, reports...)	**Principles of Agricultural Economics, d. Mohamed Shata /Faculty of Agriculture - Mansoura University.**
Electronic references, websites ,.....	

Course Description Form

1- Course Name	
Computer Applications (4)	
2-CourseCode	
COMA250	
3- Semester / Year: - Spring Semester/Year 2024	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total): - 30 hours (2 theoretical +practical) *15 weeks	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Eng. Abbas Luaibi Obaid	**Email: abbas.alrajhe@uomisan.edu.iq**
8. Course Objectives	
Course Objectives	• **The student should learn about the history of computer networks and the Internet** • **Introducing the student to the importance of computer networks and the Internet** • **Introducing the student to the basics of computer networks and the Internet** • **Introducing the student to browsing and searching the Internet** • **Student Introduction Messages and Electronic Conversation** • **Introducing the student to the ethics of the Internet world**
TEACHING AND LEARNING STRATEGIES	
Strategy	**1- Explanation, clarification and reduction of general and qualifying skills** **2 - Urging the student to write simple research towards the method of in-person lecture to create a state of balance between systematic information and source information** **3- Urging the student to make practical projects on the calculator and to conduct discussions among students about the methodology of the subject and the distribution of students in the form of groups .** **4- Practical lessons in the laboratory** **5- The method of self-learning and writing scientific reports and urging the student to evaluate the answer of his colleagues from other students to develop self-development .**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	**2**	**Chapter One : Introduction to**	**Basics of Networking and**	**Hands-on lectures + live**	**Daily, Monthly and Final**

		Networks , Definition of Computer Networks, Benefits of Computer Networks	Office Applications Part Four	presentations + dialogue and discussion	Quizzes and Reports
Level 2	2	Types of computer networks, classification of networks (according to the method of connection , according to the engineering design, according to the type of service , according to the network scope)	Basics of Networking and Office Applications Part Four	Hands-on lectures + live presentations + dialogue and discussion	Daily, Monthly and Final Quizzes and Reports
third	2	World Wide Web (Ways to connect to the Internet , Internet protocols, device addresses (IP), website addresses (web pages) ..)	Basics of Networking and Office Applications Part Four	Hands-on lectures + live presentations + dialogue and discussion	Daily, Monthly and Final Quizzes and Reports
Fourth	2	Data Transfer Rate/ Internet and Extranet /Cloud Computing/Cloud Computing Applications, Cloud Components, Types of Cloud Computing Benefits and Disadvantages of Cloud Computing	Basics of Networking and Office Applications Part Four	Hands-on lectures + live presentations + dialogue and discussion	Daily, Monthly and Final Quizzes and Reports
Fifth	2	Chapter Two (Browsing and Searching the Internet , Web Browsers, Internet Explorer , Internet Explorer Interface Components)	Basics of Networking and Office Applications Part Four	Hands-on lectures + live presentations + dialogue and discussion	Daily, Monthly and Final Quizzes and Reports
Six	2	Additional tasks in the browser ,	Basics of Networking and	Hands-on lectures + live	Daily, Monthly and Final

		searching on the Internet , using search engines, advanced search, search by customizing the search field, types of sites	**Office Applications Part Four**	**presentations + dialogue and discussion**	**Quizzes and Reports**
Seven	**2**	**The first exam is half of the course Discussing the required seminars from students in the text of the course**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Eighth	**2**	**Chapter Three (Messages and Electronic Conversation, Introduction , Email , Email Features, Creating a New Email Account**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Nine	**2**	**Email login, Microsoft Outlook ,**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
10th Grade	**2**	**Skype Conversation Software, Steps to Download Skype Conversation Software, Skype Conversation Software Installation Process,**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
11th Grade	**2**	**Familiarize yourself with Skype chat software components, Skype chat menu bar, other parts of Skype chat software, additional Skype chat software tasks.**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**

12th Grade	**2**	**Chapter Four :Ethics of the Internet World, Internet Law and Types of Infringements in the Digital Space,Ethics of Technology ,Ethics and Ethics of Dealing with the Internet ,**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Thirteenth	**2**	**The effects of the negative use of the Internet on life and society, information security and the Internet, information security,**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fourteenth	**2**	**Weaknesses in the Internet , security problems, computer vulnerability, computer and information protection**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and Reports**
Fifteenth	**2**	**The second exam of the course and the discussion of the required students in the text of the course**	**Basics of Networking and Office Applications Part Four**	**Hands-on lectures + live presentations + dialogue and discussion**	**Daily, Monthly and Final Quizzes and 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 Book Four)	**Author: 1- Prof. Dr. Ghassan Hamid Abdul Majeed** **2-Prof. Dr. Ziad Mohamed Abboud** **3-Prof. Dr. Mohammed Nasser Al-Tarafi** **4-Prof. Dr. Safa Abis Al-Maamouri** **2. Internet**
Key References (Sources)	**1- Ethics of the Internet – A.M. Alawi Hind - Arab University Center** **2- Ethics of dealing with technical and communication resources – Dr. Hussein bin Said bin Saif**

	3- Virtual World Ethics – Dr. Louay Al-Zoubi 2013
Recommended books and references (scientific journals, reports...)	
Electronic references, websites ,.....	Library Genesis Websites: - History of the development of computer networks, thematic website: http://mawdoo3.com http://youstaff.blogspot.com :Information and Internet Security http://geeklesstech.com : Internet Laws for Internet Use - - Internet Real-Time Communication Protocols (RTP SIP) technology world website. ARPANET logical map, http://russbellew.com/Documents/Arpanet_sep_1974. jpg

Course Description Form

1- Course Name	
English 2	
2-CourseCode	
ENGL444	
3- Semester / Year: - Spring Semester/Year 2024	
4-The date of preparing this description	
5. Forms of Attendance: Compact	
6. Number of study hours (total) / number of units (total)	
Course Admin Name	
Eng. 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
1,2,3	3	The student should get acquainted with the concept of the English language	English	Explanation and presentation of the model and lecture	Exam:
4and 5	2	The student should get acquainted with the sources of the English language	Times	Explanation and presentation of the model and lecture	Exam:
6and 7	2	The student should learn about the types of English .	Present Perfect	Explanation and presentation of the model and lecture	Exam:
8& 9	2	The student should know the rules of the English language.	Present simple Tense	Explanation and presentation of the model and lecture	Exam:
10and 11	2	The student should know the basics of the English language.	Simple Past	Explanation and presentation of the model and lecture	Exam:
12and 13	2	The student should know the times of the English language.	The future	Explanation and presentation of the model	Exam:

				and lecture	
14and 15	2	The student should learn how to express sentences in English.	Will have been?	Explanation and presentation of the model 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)	1- English Language -2 Introduction to English Language
Key References (Sources)	1- Study/ teams of Saudi professional/ Ahmed Othman 2- Review Victor Sahab, The Arab World in Languages (King Abdulaziz International Cultural Center,an initiative of Saudi Aramco) 0 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- Name of the Rapporteur/Principles of Freedom and Democracy
2-CourseCode
3- Semester / Year / Quarterly – Second 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 officer: Prof.Dr. Ali Aziz Dawood

	Email: ali_izaz@uomisan.edu.iq
8. Course Objectives	
Course Objectives	• Introducing students to the concept of freedom and democracy and its emergence. • Introducing students to human rights and democracy in ancient civilizations. • Introducing students to human rights in the divine laws and religions. • Emphasizing the features and characteristics of human rights and the extent of their application in power. • Emphasizing the application of freedom and democracy in its correct sense according to the societal perspective.
TEACHING AND LEARNING STRATEGIES	
Strategy	The existing strategy in the application of this course is for the student to learn about the nature of freedom and democracy and its definition and the most important ways of its spread and application, as well as the definition of the characteristics of human rights under different governments in our contemporary world.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Divorce	1 Theory	Introduction to Freedom and Democracy	|||UNTRANSLATED_CONTENT_START|||التعريف والأهداف , |||UNTRANSLATED_CONTENT_END|||	Theoretical Lecture	Exams + Cosats
Level 2	1 Theory	Freedom and democracy?	Introductions to Freedom and Democracy in Ancient Civilizations	Theoretical Lecture	Exams + Cosats
third	1 Theory	Identify what human rights are	In Ancient Civilization.	Theoretical Lecture	Exams + Cosats
Fourth	1 Theory	Understanding and	Guarantees of the application of the human right to live as a human being	Theoretical Lecture	Exams + Cosats

		understanding of the most important rights of man			
Fifth	1 Theory	Defining the concept and characteristics of human rights	Defining the concept of human rights and its divisions	Theoretical Lecture	Exams + Cosats
Six	1 Theory	Forms of human rights	Explanation and clarification of human rights forms and categories	Theoretical Lecture	Exams + Cosats
Seven	1 Theory	Libertés Publiques	Definition of freedom according to the linguistic and legal term	Theoretical Lecture	Exams + Cosats
Eighth	1 Theory	Freedom and Democracy in the Western Perspective	Explanation and clarification of freedom and democracy in the Western perspective	Theoretical Lecture	Exams + Cosats
Nine	1 Theory	Characteristics of democratic leadership:	Explanation and clarification of the most important characteristics	Theoretical Lecture	Exams + Cosats
10th Grade	1 Theory	Emergence of democracy	The most important ways of spreading democracy	Theoretical Lecture	Exams + Cosats
11th Grade	1 Theory	Images of Democracy	Introducing the most important forms of democracy	Theoretical Lecture	Exams + Cosats
12th Grade	1 Theory	Islam and Democracy	Governance and Authority in the Concept of Islam	Theoretical Lecture	Exams + Cosats
Thirteenth	1 Theory	Fiji a Democratic State	A democratic state is a citizen state?	Theoretical Lecture	Exams + Cosats
Fourteenth	1 Theory	Dictatorial regimes	How dictatorial regimes arise	Theoretical Lecture	Exams + Cosats
Fifteenth	1 Theory	Quarterly Exam Review	Monthly Exam	Theoretical Lecture	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)	Books related to freedom, democracy and human rights for a group of authors
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 ,.....	found on webpages

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	**7- Presentation of courses using pictures and illustrations** **8- Conducting practical lectures in laboratories and training students to conduct laboratory tests** **9- 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 Theoretical & 3 Practical**	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 Theoretical & 3 Practical**	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 Theoretical & 3 Practical**	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 3 Practical	Hatching and hatch management	Emptying eggs (factors affecting the emptying eggs before they are laid by the chicken)	Theory/ practicals	
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	Theory/ practicals	Exams + Cosats

			development		
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 3 Practical	Hatching and hatch management	Hatching Plan	Theory/ practicals	Exams + Cosats
Thirteenth	2 Theoretical 3 Practical	Hatching and hatch management	healtcare	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	Saliva Production/Saliva	1-	Daily and

		the components of saliva, its work and its importance in ruminants	Functions/ Factors Affecting the Quantity and Quality of Saliva / Factors Affecting Digestion	Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	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 properties, classification, enzymatic and microbial digestion and metabolism	Second:Proteins/ 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		Daily and monthly 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 fodder	/ Type I: Green Coarse Feedstuffs / Type II :Silage/ Type III -Dry Coarse Feedstuffs /	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
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	Classroom lecture	Questions during the lecture

			function		
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 element is used	Classroom lecture	Questions during the lecture
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.) 7- First month exam of 20 marks					

8- Second month exam of 20 marks 9- Make surprise daily exams with 3 grades 10- Report on Article 3 marks 11- Extracurricular activities 4 degrees 12- 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	the exam

				lecture	
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	Semester Exam, Daily Exam, Student Performance Evaluation, Homework
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	
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	
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	Exam

				and Lecture	
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 (n.)	Explanation, Model Presentation and Lecture	Exam
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	Poultry	Explanation,	Exam

		of the female reproductive system, female sex glands)	(n.)	Model Presentation 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)	Physiology of Poultry Birds/ Written by Prof. Dr. Diaa 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 Touhleh
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**	**Technology of poultry products**	**Explanation, Model Presentation and Lecture**	**Exam**

		production, the reality of egg production, and the reality of poultry meat production)			
Level 2	**2**	**Types of poultry projects,measuring the specific weight of the egg**	**Technology of poultry products**	**Explanation, Model Presentation and Lecture**	**Exam**
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,**	**Technology of poultry products**	**Explanation, Model Presentation and Lecture**	**Exam**

		the scale of the egg guide			
Eighth	**2**	**Chemical and nutritional properties of poultry meat, poultry meat composition, factors affecting the chemical composition of poultry meat, unit scale is**	**Technology of poultry products**	**Explanation, Model Presentation and Lecture**	**Exam**
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**	**Exam**

				and Lecture	
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	Daily and monthly reports .

				Discussion	
third	5	Introducing students to the most important factors affecting the nutritional value of the leeches used in animal nutrition	Factors affecting the nutritional value of feedstuffs	1- Theoretical lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	Daily and monthly reports .
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 methods Dialogue and Discussion	Daily and monthly reports .
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	Nutritional	1- Theoretical	Daily and monthly

		animal's protein needs according to age and production	Needs/Protein Needs	lectures. 2- Practical lectures. Rendering methods Dialogue and Discussion	reports .
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	Daily and monthly reports .

				methods Dialogue and Discussion	
Fifteenth	5	Enabling students to know the needs of work animals of nutrients	Business needs/wool production needs	1- Theoretical lectures. 2- Practical lectures. Rendering methods 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 (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)

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.	Daily and monthly reports .

				Displays Dialogue and Discussion	
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.	Daily and monthly reports .

				2- Practical lectures. Displays Dialogue and Discussion	
13	5	The student learns about artificial insemination (introduction , semen collection and artificial insemination techniques)	Reproductive Physiology	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
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	Exam:

				and lecture	
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 Environment – Impact of the Common Genetic Source	Animal Breeding and Improvement	Explanation and presentation of the model and lecture	Exam:
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) – internal education laboratories and degree of kinship , model education, " external education (dimensional education) – external mixing , mixing of breeds (hybrid strength), grading , reality of cows	Animal Breeding and Improvement	Explanation and presentation of the model 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)			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	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- 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	Exam:

				lecture	
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.	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)	5- Study/ teams of Saudi professional/ Ahmed Othman 6- Review Victor Sahab, The Arab World Languages (King Abdulaziz Center for World Culture,an initiative of Saudi Aramco) 7- 4 Study/ teams of Saudi professional/ Ahmed Othman/ 8- 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**	**Proteins and**	**1-**	**Daily and**

		the most important factors affecting protein utilization.	**factors affecting their utilization**	**Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion**	**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 Importance and Sections**	**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 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_|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 problems		Lecture Methodology books/production of sheep and goats	Reports & Coz
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**	**meat production**	**Explanation, presentation of**	**the exam**

		consumption of beef cattle		**the model and lecture**	
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 slaughtering ratio**	**meat production**	**Explanation, presentation of the model and lecture**	**the exam**
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	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 .

		egg.			
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 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)	Management and production of meat poultry	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
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	Daily and monthly reports .

				Discussion	
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 preparation	Management of fodder factories and preparation of fodder .	1- Theoretical lectures. 2- Practical lectures. Displays Dialogue and Discussion	Daily and monthly reports .
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)75 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	2 Theoretical Practical 3	Pasture management	The importance of pastures	Theoretical + Practical	Exams + Cups
2	2 Theoretical Practical 3	Pasture management	Vegetable . clothing	Theoretical + Practical	Exams + Cups
3	2 Theoretical Practical 3	Pasture management	Environmental factors and natural pastures	Theoretical + Practical	Exams + Cups
4	2 Theoretical Practical 3	Pasture management	Climatic factors.	Theoretical + Practical	Exams + Cups
5	2	Pasture management	Pasture	Theoretical +	Exams +

	Theoretical Practical 3		management and its relationship to soil and water conservation	Practical	Cups
6	2 Theoretical Practical 3	Pasture management	The role of . plants in maintaining soil and pastoral areas in Iraq and the world	Theoretical + Practical	Exams + Cups
7	2 Theoretical Practical 3	Pasture management	.Monthly exam	Theoretical + Practical	Exams + Cups
8	2 Theoretical Practical 3	Pasture management	Grazing and its various effects on fodder production, plant growth, and root growth	Theoretical + Practical	Exams + Cups
9	2 Theoretical Practical 3	Pasture management	Animal load and its determining factors	Theoretical + Practical	Exams + Cups
10	2 Theoretical Practical 3	Pasture management	Exploitation of natural pastures	Theoretical + Practical	Exams + Cups
11	2 Theoretical Practical 3	Pasture management	Sources of exploitation of pastoral plants and the condition of natural pastures	Theoretical + Practical	Exams + Cups
12	2 Theoretical Practical 3	Pasture management	Livestock management and pasture redressing	Theoretical + Practical	Exams + Cups
13	2 Theoretical Practical 3	Pasture management	For natural and artificial coverings and harmful plants in pastures	Theoretical + Practical	Exams + Cups
14	2 Theoretical Practical 3	Pasture management	Methods of taking pasture samples and estimating pasture productivity	Theoretical + Practical	Exams + Cups
15	2 Theoretical Practical 3	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_ي|||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	**10- Presentation of courses using pictures and illustrations that facilitate the student's understanding of the subject** **11- Training students to conduct laboratory tests in a way that develops students' skills in this field** **12- 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. *In molecular pathology in clinical paractice* (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**	**Recent development of livestock in the world /Factors that led to a decrease in livestock production in Iraq /Evaluation**	**Methodical books**	**mug, tankard, jug, ewer, cone**

		production	of milk cows		
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**	**the exam**

				lecture	
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, presentation of the model and lecture**	**the exam**
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	Buffalo	Presentation/Lecture	mug, tankard,

		periods of sexual dormancy	reproduction	Method	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	**11- The student should get acquainted with the concept of the English language** **12- The student should learn about the ways of expressing the English language** **13- The student should know the rules of the English language** **14- The student should describe the types of English language** **15- 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(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**	**Exam:**

				and lecture	
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**	Second Month Exam	**Explanation**	**Comprehensive**

		learn how to express sentences in English.		**and presentation of the model and lecture**	**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)			English in Ariculture 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.		