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



# Description of the academic program Plant Protection Department

# **Introduction:**

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

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

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

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

# **Concepts and terminology:**

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

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

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

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

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

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

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

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

#### **Approval of the Dean**

# Academic Program Description Form

University Name: Wash Faculty/Institute: Agriculture Scientific Department: Plant protection Academic or Professional Program Name: Bscin Agriculture Final Certificate Name: A griculture Academic System: Semestures Description Preparation Date: 28/2/2024 File Completion Date: 28/2/2024

Signature: Head of Department Name: Dr. Hasan Hadi Faraj Date: 21/5/2024 Assist. Proi Jawadayn Talib Abed Dean Assistant for Scientific Affairs & Signature:

Scientific Associate Name:

Date: 21/5/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Date: 21/5/2024

Signature: S pt . Hibat Allah A. H. Ussein

Assist. Prof ULI Dr. Hakeem.S. Abed

**Dean** Approval of the Dean

# 1. Program Vision

The Plant Protection Department aspires to be the best in learning and scientific research and to provide valuable scientific advice and consultations that contribute to raising agricultural crops to the highest levels and protecting crops from the danger of numerous pests that threaten them for the benefit of society

# 2. Program Mission

The Plant Protection Department aspires to be the best in learning and scientific research and to provide valuable scientific advice and consultations that contribute to raising agricultural crops to the highest levels and protecting crops from the Danger of numerous pests that threaten them for the benefit of society.

# 3. Program Objectives

<sup>1</sup>. Promoting education on citizenship, belonging to the homeland, and preserving its institutions.

<sup>Y</sup>.Providing students with appropriate experience in teaching methods, techniques, and skills.

3.Developing the performance and creative abilities of students in the linguistic, educational, cognitive, artistic and technical aspects.

4.Disseminating knowledge among the classes of society about the importance of the safety of agricultural products, such as their freedom from diseases, pesticide residues, insect infestations.

# 4. **Program Accreditation**

The department is in the process of obtaining programmatic accreditation through Standards launched by the Ministry of Higher Education and Scientific Research.

# 5. Other external influences

Central admission

6. Program Structure								
Program Structure	Number of Courses	Credit hours	Percentage	Reviews*				
Institution Requirements	V	۹,	<b>%</b> ۷,•۸	Principal				
College Requirements	11	٣٤	% ४२,४४	Principal				
Department Requirements	۲ź	٨ ٤	%77,12	Principal				

Summer Training		Principal
Other		

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

7. Program Description								
Year/Level	Course Code	Course Name		Credit Hours				
	Code		theoretical	practical				
First year/first semester		Principles of insects	Y	w practical				
i nist year/mist semester		1		,				
First year/first semester		General chemistry	۲	٣				
First year/first semester		English language	١	-				
First year/first semester		computer	۲	_				
First year/first semester		agricultural economy	۲	_				
First year/first semester		Zoology	۲	٣				
First year/first semester		Arabic Language	١	-				
First year/first semester		human rights	١	-				
First year/second semester		Principles of insects	۲	٣				
5		2						
First year/second semester		mathematics	۲	-				
First year/second semester		organic chemistry	۲	٣				
First year/second semester		General plant	۲	٣				
First year/second semester		Gardening principles	۲	٣				
First year/second semester		Soil principles	۲	٣				
Second year/first semester		Plant classification	۲	٣				
Second year/first semester		Plant physiology	۲	٣				
Second year/first semester		Microbiology	۲	٣				
Second year/first semester		Agricultural	۲	-				
Second year/first semester		Principles of	۲	٣				
2		statistics						
Second year/first semester		Computer	۲	-				
Second year/first semester		Animal production	۲	٣				
Second year/first semester		Field crops	۲	٣				
Second year/first semester		Baath Party crimes	١	-				
Second year/second semester		Medical and	۲	٣				
		veterinary insects						
Second year/second semester		Plant nutrition	۲	٣				
Second year/second semester		Agricultural	۲	٣				
		machines and						
		machinery						
Second year/second semester		Classification of	۲	٣				
		insects						
Second year/second semester		analytical chemistry	۲	٣				
Second year/second semester		English language	۲	-				
Third year/first semester		Fungi1	۲	٣				

Third year/first semester	Ecology	۲	٣
Third year/first semester	Insect physiology	۲	٣
Third year/first semester	Genetics	۲	٣
Third year/first semester	Design and analysis	۲	٣
	of experiments		
Third year/first semester	Biochemistry	۲	٣
Third year/second semester	Plant diseases	۲	٣
Third year/second semester	Nematode	۲	٣
Third year/second semester	Honey bees	۲	٣
Third year/second semester	Fungi 2	۲	٣
Third year/second semester	Biotechnology	۲	٣
Third year/second semester	Weeds and control	۲	٣
Third year/second semester	Plant breeding	۲	٣
Fourth year/first semester	Crop diseases	۲	٣
Fourth year/first semester	Vegetable diseases	۲	٣
Fourth year/first semester	Insect environment	۲	٣
Fourth year/first semester	Store pests	۲	٣
Fourth year/first semester	Pesticides	۲	٣
Fourth year/first semester	Biological control	۲	٣
Fourth year/first semester	Seminars	۲	٣
Fourth year/second semester	Fruit diseases	۲	٣
Fourth year/second semester	Integrated pest	۲	٣
	management		
Fourth year/second semester	Viruses	۲	٣
Fourth year/second semester	Acarology	۲	٣
Fourth year/second semester	Graduation research	۲	٣
	project		
Fourth year/second semester	Crop insects	۲	٣
Fourth year/second semester	Orchard insects	۲	٣

8. Expected learning outcomes of the program									
Knowledge	Knowledge								
<ul> <li>Teaching students the theoretical and practical foundations for diagnosing plant pests and the methods that must be followed to reduce their economic damage</li> <li>Teaching students the management methods used in various plant protection projects and alternatives in management methods in a way that ensures communication with the global development in technologies and the needs of the labor market.</li> <li>Teaching students the correct</li> </ul>	<ol> <li>Graduation of an agricultural engineer specializing in plant protection, capable of solving all the problems facing farmers of vegetables and field crops, whether they are insects or other pathogens.</li> <li>Taking advantage of modern information to solve problems affecting the plant using the best solutions that are compatible with the market need</li> <li>Graduating a conscious generation with high values and good morals to improve the agricultural situation in Iraq</li> </ol>								

projects.actual agricultural situationEnsuring that students are trained in methods of communicating new information in the field of specialization to develop information, skills, and methods of communicating information to the team participating in the management of plant pests through training in formulating and giving lectures. - Training students to complete the scientific research stage by applying the sections of the scientific method in research and preparing the student to work in research and development centers or complete His higher studiesactual agricultural situation - Producing a conscious and educated generation capable of supplying the scientific competencies in the academic program to meet its need for the required specializations Training students to complete the scientific method in research and preparing the student to work in research and development centers or complete His higher studies- Producing a conscious and educated generation capable of supplying the scientific method. Promulating and preparing the student to work in research and development centers or complete His higher studies
Learning Outcomes 3     Learning Outcomes Statement 3
Ethics
-The academic program adopted Learning Outcomes Statement 4
educational values in dealing
with students to cultivate the
with students to cultivate the
desire and interaction among

students to seek knowledge and seek to spread scientific benefit	
seek to spread scientific benefit	
4	
to society through mastering the	
work in completing it.	
- Stirring students' ambition for	
achievement and excellence,	
developing self-confidence, the	
potential of youth, and the need	
of society.	
To this human potential in	
construction	
- Focusing on the importance of	
fair competition in the	
development and prosperity of	
projects, and that the arena for	
success is open to those who are	
diligent and honest in working	
and winning markets for their	
products by adopting	
the quality	
- Spreading the importance of	
the individual's contribution to	
society and not relying on the	
efforts of others in order to	
avoid the emergence of a class	
of unemployed within the group	
that hides under the	
achievements of the persistent	
and creative members of the	
group.	
- Spreading the culture of	
purifying society and providing	
good advice to avoid the	
reflection of honoring	
distinguished students to focus	
act of a few that harms the	
society	
the spotlight on role models Good behavior: The disgraceful act of a few that harms the reputation and dignity of a good	

# 9. Teaching and Learning Strategies

Teaching and learning strategies and methods adopted in implementing the program in general

- Using the method of delivering information through the lecture, using the blackboard, a data display device, an interactive lecture, and displaying an educational video that provides the opportunity to watch field or laboratory operations.

- Participation of students in obtaining information by asking them to submit

scientific reports on specific paragraphs of the curriculum, which ensures the expansion of the student's cognitive ability and training him on means of accessing modern information for his future information.

-Training students in the method of logical discussion to reach results, as well as the method of deduction

-Training students on educational commitment to behavior inside the lecture hall, in the laboratory, field, or greenhouses, ensuring the prevalence of sound behavior in the educational institution and after graduation.

- Learning through applied field practices and providing students with the opportunity to apply knowledge in the field

# **10. Evaluation methods**

Monthly exams

Daily exams

Practical exams

The final exam has both theoretical and practical parts

To evaluate during summer training in government departments and submit a report

11.Faculty						
Faculty Members	5					
Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff		
	General	Special		Staff	Lecturer	
Professor	Plant protection	Plant diseases		1		
Professor	Plant protection	Insects		1		
Assist. Professor	Plant protection	Insects		1		
Assist. Professor	Plant protection	Microbiology		1		
Assist. Professor	Plant protection	Plant diseases		1		
Lecturer	Food industry	Human nutrition		1		
Lecturer	Teaching methods	Research		1		

Assist. Lecturer	Plant protection	Plant diseases		1	
Assist. Lecturer	Biology	Zoology		1	

# **Professional Development**

Mentoring new faculty members

Developing the self-development of new and full-time faculty members by urging them to participate in courses, attend seminars, conferences, and discussion panels, and conduct studies and research in their field of specialization, which will raise their academic level and work within the group effectively and actively, such as introducing them to teaching methods courses to teach them.

#### Professional development of faculty members

Developing the administrative, professional, and academic skills of faculty members, such as working in a team effectively and actively, and decision-making skills in academic and administrative work, such as introducing them to teaching methods courses and developing English language and computer skills.

# **12.Acceptance Criterion**

**Central admission** 

# 13. The most important sources of information about the program

The college and university website University guide the central Library -They are the department's books and resources The Internet

14.Program Development Plan

- Students, especially the top ones in their scientific departments, outside Iraq, especially in developed countries.

2- To develop each person's skills according to his desire and according to the specializations in the scientific department.

3- Cooperation between Iraqi universities and international universities by sending teaching staff to international universities

4- Developing the idea of a visiting professor to provide universities with expertise and the latest findings of science in agricultural fields.

5- Cooperation between Iraqi universities and other universities through discussion with postgraduate students

# **Professional Development**

#### Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the

institution and department level.

#### Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc. Such as

1- Teamwork: Working within the group effectively and actively

2- Time management: Managing time effectively and setting priorities with the ability to work organized and within specified dates.

3- Leadership: The ability to direct and motivate others

4- Independence at work

Negotiation and persuasion, meaning the student's ability to persuade others and discuss to reach an agreement.

# 12. Acceptance Criterion

Central admission by the Ministry of Higher Education and Scientific Research.

# 13. The most important sources of information about the program

Guide books and other resources in the free education unit and the college and university library.

- 14. Program Development Plan
- 1. Developing skills for teachers.
- 2. Modern sources.
- 3. Specialized courses and seminars.
- 4. Agricultural scientific conferences.

			Pro	ogram	Skills	Outl	ine								
				Required program Learning outcomes											
	Course Code	Course Name	Basic or	Knov	vledge	I		Skills			Ethics				
			optional	A1	A2	A3	A4	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	C1	C2	C3	C4
First		Mathematic 1	Basic				~				~				~
		Soil principles	Basic				~				~				~
First		Principles of general entomology 1	Basic				~				~				~
		Principles of general entomology 2	Basic				~				~				~
First		Safety and biosecurity	Basic				~				~				~
		Human rights and democracy	Basic				~				~				~
First		Baath system crimes	Basic				~				~				~

Second	Agricultural machinery and	Basic	· · ·		✓
Second	Medical and veterinary entomology	Basic			~
Second	Statistics	Basic	× –	~	~
First	Computer fundamentals 2	Basic	· ·	· ·	· ·
First	English language1	Basic	V	<b>v</b>	~
First	Basics of gardening and landscaping	Basic		~	~
First	General plant basics	Basic	· ·	~	~
First	Computer fundamentals 1	Basic	· ·	· ·	<b>v</b>
First	organic chemistry	Basic	· ·	· ·	<ul> <li>✓</li> </ul>
First	Zoology	Basic	· ·	<b>v</b>	~
	Arabic Language	Basic	· · ·	<b>v</b>	~

Second	Plant physiology	Basic	✓	<ul> <li>✓</li> </ul>	~ ~
Second	Insect taxonomy	Basic	✓	<ul> <li>✓</li> </ul>	~
Second	English	Basic	V	<ul> <li>✓</li> </ul>	~
Second	Basics of field crops	Basic	✓	<ul> <li>✓</li> </ul>	~
Second	Principles of animal production	Basic	· ·	~	~
Second	analytical chemistry	Basic	· ·	<b>~</b>	V
Second	Plant nutrition	Basic	· · ·	· ·	~
Second	Computer applications 2	Basic	· ·	<b>v</b>	~
Second	Microbiology	Basic	· · ·	· ·	v
Second	Plant classification	Basic	<b>v</b>	<ul> <li>✓</li> </ul>	~
Second	Agricultural guidance	Basic	<b>v</b>	<b>v</b>	~
Second	Computer applications 1	Basic	· ·	<b>v</b>	V

Third	Biotechnology	Basic	<ul> <li>✓</li> </ul>	V	<ul> <li>✓</li> </ul>
Third	Insect physiology	Basic	· ·	~	✓
Third	Nematodes	Basic	· ·	~	✓
Third	Bees breeding	Basic	· ·	~	V
Third	Design and analysis of experiments	Basic	· ·	· ·	~
Third	Mycology II	Basic	<b>v</b>	· ·	· ·
Third	Plant diseases (Plant pathology)	Basic	· ·	· ·	v
Third	Weed control	Basic	<ul> <li>✓</li> </ul>	· ·	· ·
Third	Biochemistry	Basic	· ·	v	· ·
Third	Plant genetics	Basic	· ·	~	· ·
Third	English	Basic	· ·	~	· ·
Third	Plant Breeding and Improvement	Basic	×	<ul> <li>✓</li> </ul>	~ ~

Third	Ecology	Basic	<b>v</b>	<ul> <li>✓</li> </ul>	~
Fourth	Integrated pests management	Basic	· ·	~	~ ~
Fourth	Professional Ethics	Basic	~	<b>v</b>	~
Fourth	Biological Control	Basic	<ul> <li>✓</li> </ul>	V	v
Fourth	Field crop diseases	Basic	<ul> <li>✓</li> </ul>	· ·	~
Fourth	Pesticides	Basic	×	<ul> <li>✓</li> </ul>	~
Fourth	Plant viruses	Basic	×	<ul> <li>✓</li> </ul>	~
Fourth	English	Basic	×	<ul> <li>✓</li> </ul>	· ·
Fourth	Insects Ecology	Basic	×	<ul> <li>✓</li> </ul>	~
Fourth	sustainable development	Basic	· ·	· ·	V
Fourth	Store pests	Basic	<b>v</b>	<ul> <li>✓</li> </ul>	v
Fourth	Orchard insects	Basic	×	<ul> <li>✓</li> </ul>	~
Fourth	Crop Insects	Basic	<ul> <li>✓</li> </ul>	· ·	<ul> <li>✓</li> </ul>
Fourth	Vegetables diseases	Basic	<ul> <li>✓</li> </ul>	· ·	<ul> <li>✓</li> </ul>
Fourth	Acarology	Basic	· ·	<b>v</b>	· ·

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

	Carriera	[				
Mather	Course N	lame:				
	Course C	ada				
Ζ.		oue.				
3.	Semester	/ Year:				
First Sei	mester /	First Year				
4. ]	Descripti	on Preparatio	on Date:			
28/2/202						
		e Attendance tendance	Forms:			
			urs (Total) / Num	ber of Units (Total)		
		tical / 2 Units				
7. (	Course a	administrato	or's name (men	tion all, if more tha	n one name)	
Name: Email:						
8. (	Course C	Objectives				
Course	Objectiv	es			g and having the abili	ty to find solutions
				ct laws and mathema	atical operations.	ons and their types
					natrices and types of fu	
			4- Learn how t	o draw a function		
				nathematical method	ls to perform solutions.	
9. T			ng Strategies			
Strategy 1. Explaining and clarifying the mathematical concept and stating the laws related to it.						
2					cept and stating the law	s related to it.
2	2	. Give some	examples related	l to the topic.		
2. alog	2 3	. Give some	examples related	l to the topic.	cept and stating the law	
2	2 3 1 4	2. Give some 5. Involve stu aws. •. Giving the	examples related idents during the m homework and	l to the topic. lecture in solving exercises related to	amples and problems the topic that was disc	using mathematical
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10.   Co     Week   Ist     2nd	2 3 1 4 5 1 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7	2. Give some 3. Involve stua aws. 4. Giving then 5. Conduct data 4. Conduct data 5. Conduct data 4. Conduct data 5. Computation 5. Computation 5	examples related idents during the m homework and aily tests for stude Learning s Matrix Matrix tional methods olving matrices ions in solving ns and finding	l to the topic. lecture in solving exercises related to ents in addition to m Unit or subject name Mathematic 1 Mathematic 1	the topic that was disconthly tests.           Learning method           Explanation and presentation           Model and lecture           Explanation and presentation           Model and lecture           Explanation and presentation           Model and lecture           Explanation and presentation	Evaluation method Examination
10.   Co     Week   Ist     1st   2nd     3rd	2 3 1 4 5 1 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7	2. Give some 3. Involve stua aws. 4. Giving then 5. Conduct data 4. Conduct data 5. Conduct data 4. Conduct data 5. Computation 5. Computation 5	examples related idents during the m homework and aily tests for study Learning Matrix Matrix Matrix itional methods olving matrices ions in solving	l to the topic. lecture in solving exercises related to ents in addition to m Unit or subject name Mathematic 1 Mathematic 1	amples and problems         the topic that was disconthly tests.         Learning method         Explanation and presentation         Model and lecture         Explanation and presentation         Model and lecture	Evaluation method Examination Examination
10.   Co     Week   Ist     1st   2nd     3rd	2 3 1 4 5 1 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7	2. Give some 3. Involve stua aws. 4. Conduct da 5. Conduct da 5. Conduct da 6. Conduct da 6. Conduct da 7. Conduct da 9. Computa 9. Computa 9. Conduct da 9. Co	examples related idents during the m homework and aily tests for stude Learning s Matrix Matrix tional methods olving matrices ions in solving ns and finding	l to the topic. lecture in solving exercises related to ents in addition to m Unit or subject name Mathematic 1 Mathematic 1	amples and problems to the topic that was disconthly tests. Learning method Explanation and presentation Model and lecture Explanation and presentation	Evaluation method Examination Examination
10.   Co     Week   1     1st   2     3rd   4	23 14 5 urse Str Hours 2 2 2 2 2	2. Give some 3. Involve stua aws. 4. Conduct da 5. Conduct da 5. Conduct da 6. Conduct da 6. Conduct da 7. Conduct da 9. Computa 9. Computa 9. Conduct da 9. Co	examples related idents during the m homework and aily tests for stude Learning Matrix Matrix Matrix itional methods olving matrices itions in solving ns and finding ix inverses	l to the topic. lecture in solving exercises related to ents in addition to m Unit or subject name Mathematic 1 Mathematic 1 Mathematic 1	amples and problems to the topic that was disconthly tests. Learning method Explanation and presentation Model and lecture Explanation and presentation Model and lecture	Evaluation method Examination Examination Examination
10.   Co     Week   1     1st   2     3rd   4	23 14 5 urse Str Hours 2 2 2 2 2	2. Give some 3. Involve stua aws. 4. Giving ther 5. Conduct data 4. Conduct data 4. Conduct data 4. Conduct data 4. Conduct data 4. Conduct data 4. Conduct data 5. Conduct data 4. Conduct data 5. Computa 5. Compu	examples related idents during the m homework and aily tests for stude Learning Matrix Matrix Matrix itional methods olving matrices itions in solving ns and finding ix inverses	l to the topic. lecture in solving exercises related to ents in addition to m Unit or subject name Mathematic 1 Mathematic 1 Mathematic 1	amples and problems to the topic that was disconthly tests. Learning method Explanation and presentation Model and lecture Explanation and presentation	Evaluation method Examination Examination Examination

7th	2	Types of Mathematical function	Mathematic 1	Explanation and presentation Model and lecture	Examination
8th	2	Differential relations used In the function	Mathematic 1	Explanation and presentation Model and lecture	Examination
9th	2	Higher ranks of Function	Mathematic 1	Explanation and presentation Model and lecture	Examination
10th	2	Partial derivatives	Mathematic 1	Explanation and presentation Model and lecture	Examination
11th	2	Function applications	Mathematic 1	Explanation and presentation Model and lecture	Examination
12 <sup>th</sup>	2	Increasing, decreasing, and endings Great and small	Mathematic 1	Explanation and presentation Model and lecture	Examination
13 <sup>th</sup>	2	Concavity and convexity curves in the function	Mathematic 1	Explanation and presentation Model and lecture	Examination
14 <sup>th</sup>	2	Drawing functions	Mathematic 1	Explanation and presentation Model and lecture	Examination
15th	2	Solved problems and examples of graphing the function	Mathematic 1	Explanation and presentation Model and lecture	Examination

#### 11. Course Evaluation

1-Theoretical tests 30

2- Daily tests 103- Homework 10

4- Final exam 50

12. Learning and Teaching Resources

· ·	
Required textbooks (curricular books, if any)	1- George B. Thomas, 2003. Calculus and Analytic Geometry.
Main references (sources)	<ol> <li>Theories and problems in advanced calculus. 2008.</li> <li>Murray R. SPIEGEL. Eighth Arabic edition. International House for Cultural Investments. Egypt.</li> <li>2- 3000 solved problems in calculus. Elliot Mendelsohn. International Academy. Beirut, Lebanon.</li> </ol>
Recommended books and references (scientific	Iraqi academic scientific journals
journals, reports)	
Electronic References, Websites	

1. Course Name:

Soil principles 2. Course Code:

Semester /					
First Semes					
	cription Pr	reparation Date:			
28/2/2024					
		endance Forms:			
	ual attenda				
5. Nun	nber of Cr	edit Hours (Total) / Numb	er of Units (Total)	)	
2 theoretica	al 2 Practio	cal 3 Units			
6. Cou	rse admini	istrator's name (mention al	ll, if more than on	e name)	
Name: Email:					
7. Cou	irse Object	ives			
The studen	U	8 8			
know soil s	cience •	The student should the	-	-	
	•	The student should sep			
	•	For the student to learn For the student to evalu		-	
8. • Th	e student s	should classify the factors			
Strategy		1- Explanation and			
00		2- Lecture method			
		3- Student groups			
		4- Practical lessons	5		
		5- Scientific trips 6 - Self-learning m	etho		
		0 - Sen-learning in	leulo		
9. Cours	e Structure	;			
Week	Hours	Required Learning	Unit or subject	Learning method	Evaluation
		Outcomes	name		method
		The student will be			
		familiar with an		Explanation,	
The first	4	introduction to soil	Soil principles	presentation of the	the Exam
		science and the		model and lecture	
		emergence and development of soil			
		The student gets to		Evaluation	
Second	4	know the types of	Soil principles	Explanation, presentation of the	the Exam
		factors and soil	son principies	model and lecture	une Ladin
		formation processes			
		The student gets to		Explanation,	the Exam
Third	4	know the physical	Soil principles	presentation of the	
			1	-	

		properties of soil		model and lecture	
Fourth	4	The student gets to know the chemical properties of soil	Soil principles	Explanation, presentation of the model and lecture	the Exam
Fifth	4	The student gets to know the biological characteristics of soil	Soil principles	Explanation, presentation of the model and lecture	the Exam
Sixth	4	The student gets to know soil salinity	Soil principles	Explanation, presentation of the model and lecture	the Exam
Seventh	4	The student will be familiar with the reclamation of saline soils	Soil principles	Explanation, presentation of the model and lecture	the Exam
Eighth	4	The student gets to know the types of soil water	Soil principles	Explanation, presentation of the model and lecture	the Exam
Ninth	4	The student gets to know soil colloids	Soil principles	Explanation, presentation of the model and lecture	the Exam
Tenth	4	The student will learn about the effect of humidity on plants	Soil principles	Explanation, presentation of the model and lecture	the Exam
Eleventh	4	The student gets to know soil fertility For the student to recognize the most important reasons for low soil productivity	Soil principles	Explanation, presentation of the model and lecture	the Exam
Twelfth	4	For the student to recognize the most important reasons for low soil productivity	Soil principles	Explanation, presentation of the model and lecture	the Exam
Thirteenth	4	The student will know how to feed plants	Soil principles	Explanation, presentation of the model and lecture	the Exam
Fourteenth	4	The student gets to know the classification of soils	Soil principles	Explanation, presentation of the model and lecture	the Exam
Fifteenth	4	For the student to become familiar with educational	Sustainable development	Explanation, presentation of the model and lecture	the Exam

4- Final exam 50

11. Learning and Teaching Resources Required textbooks (curricular books, if any) Main references (sources) Recommended books and references (scientific journals, reports...) Electronic References, Websites

Iraqi academic scientific journals

Soil Science Society Of America Library Genesis

1. Course Name:

#### Principles of general entomology 1

2. Course Code:

#### 2284828

3. Semester / Year:

First semester/2023-2024

4. Description Preparation Date:

14/2/2024

5. Available Attendance Forms:

Mandatory official working hours

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

Theoretical 30 + practical 45 = 75 hoursNumber of Units = 37. Course administrator's name (mention all, if more than one name)

Name:

Email:

~ ~ o Obioati

8. Course Ob	ojectives	
Course Objectives		<ul> <li>Introducing the student to the basic principles of insects.</li> </ul>
		<ul> <li>The student gets to know the different stages of insects</li> </ul>
		<ul> <li>Introducing the student to insect families and their importance.</li> </ul>
		<ul> <li>Introducing the student to the internal and external structure of insects.</li> </ul>
9. Teaching and	Learning Strategie	es
Strategy	A- Cogn A1- Lean A2- Lean A3- Lean A4- Lean environr A5-Desc The prog B1 - Kno B2 - Ena diagnosi B3 - The animals Teach Method Explanan to displa How to p Self-lean Method	itive objectives rn about the concept of insects rn about methods for diagnosing insects and methods for determining their damage rn about the concept of entomology and controlling insect danger rn about the nature of the damage and losses caused by insects in the general ment and what these insects cause to human life and property. eribe the life cycle of insects and identify the harmful phase B - gram's skill objectives owing the concept of insects, especially insects in hot environments about to diagnose infestations and the possibility of isolating and ng insects e student's ability to estimate the limit that leads to reducing harm to humans hing and learning methods of giving lectures tion and clarification How y insect models present scientific films about medical insects ning method of collecting and diagnosing samples nation methods

		Practical tests Rep and studies	orts			
		C2- Acquiring skill C3- The possibility C4- A skill to th	ity to analyze results and our lls about insects in public y of applying skills in ider ink according to the stude and how to think about the arthropods.	environments ntifying insect types ent's ability. This aims		
		<ol> <li>How to display insect models and scientific films related to the subject</li> <li>Explanation and clarification</li> <li>Brainstorming</li> <li>The appropriate thinking and decision-making skill strategy, meaning that the stud makes a good decision when thinking about diagnosing a pest and the process of combating it and thinking about the consequences of this decision and its environmen effects.</li> </ol>				
		Evaluation meth	ods			
		Theoretical tests Practical tests Wea short tests Reports studies	-			
<ul> <li>D - General and qualifying transferable skills (other skills related to employability and personal development).</li> <li>D1-Verbal communication, which includes: <ol> <li>The ability to express ideas clearly and confidently in speech</li> <li>Teamwork</li> <li>Work confidently within the group</li> <li>Collect information systematically and scientifically to establish principles for solvi th problem</li> <li>Initiative: The motivation to work and the ability to take initiative D2-Written communication: <ol> <li>The ability to express oneself clearly in writing</li> <li>Planning and organizing / planning, organizing and implementing activities</li> <li>Flexibility and adaptation to changing situations and different environments</li> <li>Effectively manage time, prioritize tasks, and be able to work within specified deadlines</li> <li>Teaching and learning methods Explanation</li> <li>and clarification</li> <li>self education</li> <li>Giving lectures</li> </ol> </li> </ol></li></ul>				principles for solvi the re D2- g activities wironments		
10. Course S	tructure	Reports and studie	-			
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	
first	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Learn about an introduction to insects and the factors that helped them spread. theoretical Identify the types of	Practical lecture, discussion,	oral examinations	

			some laboratory equipment. practical		
Second	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify the benefits and harms of insects. theoretical Continue identifying other insects. practical	Practical lecture and discussion	oral examinations
Third	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify some phenotypi characteristics of arthropods and insects. theoretical Learn about methods of killing insects. Practical	Practical lecture, discussion,	oral examinations
Fourth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Recognizing the external appearance of insects. theoretical Learn about methods of catching insects. Practical	Practical lecture and discussion	oral examinations
Fifth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	theoretical test 1. Practical test 1.	examination	writing examinations
Sixth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify some insect body appendages. theoretical Anatomy of insects and identifying the main parts of the insect body. practical	Practical lecture, discussion,	oral examinations
Seventh	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify the main insect body regions. theoretical Identifying the types of insect fishing nets. Practical	Practical lecture, discussion,	oral examinations
Eighth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify the types of antennae in insects. theoretical Diagnosing the types of legs in insects. practical	Practical lecture and discussion	oral examinations
Ninth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify the types of legs in insects. theoretical Students identify the types of wings in insects. practical	Practical lecture, discussion,	oral examinations
Tenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identify the mechanics of flight in insects. theoretical Examining the roles of insects in different systems. Practical	Practical lecture and discussion	oral examinations
Eleventh	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identifying wing veining in insects. theoretical Making slides for different insect parts. practical	Practical lecture, discussion,	oral examinations
Twelfth	2theoretical	memorizing,	Identify wings in	Practical lecture	oral examinations

	+3 practical	understanding, analyzing, and applying	insects. theoretical How to use insect fishing nets. practical	and discussion		
Thirteenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identifying the abdomen and its appendages in insects. theoretical Identify methods of preserving insect models. practical	Practical lecture, discussion,	oral examinations	
Fourteenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying		Practical lecture and discussion	oral examinations	
Fifteenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	theoretical test2. Practical test 2.	examination	writing examinations	
11. Course	Evaluation					
	+ Daily exams and 20 practical + 30 t		+ Reports 3 + Practical exam	n 15 + Monthly exam 2	5 = 50 quest The	
12. Learning	g and Teaching R	esources				
Required text	oooks (curricular b	ooks, if any)	Book of principles of general entomology			
Main reference	es (sources)		1. Book of general insects			
Recommende (scientific journ	ed books and nals, reports)	d references	<ol> <li>Entomology book.</li> <li>Insect basics book.</li> </ol>			
Electronic Ref	erences, Websites	3	The free encyclopedia Some of the agricultural sites interested in the field of insects.			

	Course Description Form
1. Course Name:	
Principles of general er	ntomology 2
2. Course Code:	
3. Semester / Year	r:
First semester/2023-20	24
4. Description Pre	eparation Date:
2/14/2024	
5. Available Atter	
	cial working hours dit Hours (Total) / Number of Units (Total)
0. Itelliber of ele	
	+ practical 45 = 75 hours Number of Units=3
	histrator's name (mention all, if more than one name)
Name:	
Email:	
8. Course Object	lives
Course Objectives	<ul> <li>Introducing the student to the basic principles of insects.</li> </ul>
	<ul> <li>The student gets to know the different stages of insects</li> </ul>
	<ul> <li>Introducing the student to insect families and their importance.</li> </ul>
	<ul> <li>Introducing the student to the internal and external structure of insects.</li> </ul>
9. Teaching and L	
Strategy	A- Cognitive objectives
	<ul> <li>A1- Learn about the concept of insects</li> <li>A2- Learn about methods for diagnosing insects and methods for determining their damage A3-Learn about the concept of entomology and controlling insect danger</li> <li>A4- Learn about the nature of the damage and losses caused by insects in the general environment and what these insects cause to human life and property.</li> <li>A5-Describe the life cycle of insects and identify the harmful phase B - The program's skill objectives</li> <li>B1 - Knowing the concept of insects, especially insects in hot environments</li> <li>B2 - Enabling students to diagnose infestations and the possibility of isolating and diagnosin insects</li> <li>B3 - The student's ability to estimate the limit that leads to reducing harm to humans and animals</li> </ul>
	Teaching and learning methods Method of giving lectures Explanation and clarification How to display insect models How to present scientific films about medical insects Self-learning method Method of collecting and diagnosing samples Evaluation methods Theoretical tests Practical tests Reports and studies C- Emotional and value goals. C1- The ability to analyze results and diagnose insects

<ul> <li>C2- Acquiring skills about insects in public environments</li> <li>C3- The possibility of applying skills in identifying insect types</li> <li>C4- A skill to think according to the student's ability. This aims for the student to understa when and how to think about the processes of detecting and identifying insects and other typ of arthropods.</li> <li>Teaching and learning methods</li> </ul>
<ol> <li>How to display insect models and scientific films related to the subject</li> <li>Explanation and clarification</li> <li>Brainstorming</li> <li>The appropriate thinking and decision-making skill strategy, meaning that the student ma a good decision when thinking about diagnosing a pest and the process of combating it and thinking about the consequences of this decision and its environmental effects.</li> </ol>
Evaluation methods
Theoretical tests Practical tests Weekly short tests Reports and studies
<ul> <li>D - General and qualifying transferable skills (other skills related to employability and perso development).</li> <li>D1-Verbal communication, which includes: <ol> <li>The ability to express ideas clearly and confidently in speech</li> <li>Teamwork</li> </ol> </li> <li>Work confidently within the group <ol> <li>Collect information systematically and scientifically to establish principles for solving the problem</li> <li>Initiative: The motivation to work and the ability to take initiative D2-Written communication: <ol> <li>The ability to express oneself clearly in writing</li> <li>Planning and organizing / planning, organizing and implementing activities</li> <li>Flexibility and adaptation to changing situations and different environments</li> <li>Effectively manage time, prioritize tasks, and be able to work within specified deadlines Teaching and learning methods</li> </ol> </li> <li>Explanation and clarification self education <ul> <li>Giving lectures</li> </ul> </li> </ol></li></ul>
Evaluation methods Theoretical tests Practical tests Reports and studies

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning		method	method
		Outcomes			
First	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identifying the reproductive system in insects - types of reproduction. theoretical Using modern methods to identify all stages of insect species development. practical	Practical lecture, discussion	oral examinations
second 2theoretical +3 practical		memorizing, understanding, analyzing, and applying	Using modern scientific methods to identify and describe the stages of immature insects (egg, larva, pupa) - types of larvae, types of pupae theoretical	Practical lecture and discussion	oral examinations

			Growth, transformation, and identifying types of development in insects. practical		
Third	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Identifying the types of metamorphosis, transformation, or evolution in insects. Theoretical Identifying and studying the most important types of larvae. Practical	Practical lecture, discussion ,	oral examinations
Fourth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Modern methods of classifying non- evolved insects - the most important sub-orders - (silverfish, jumping tail). theoretical Identifying and studying the most important types of pupal virgins. Practical	Practical lecture and discussion	oral examinations
Fifth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	theoretical test 1. Practical test 1.	examinati on	writing examination s
Sixth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Classification of insects with gradual development, with examples of their orders. theoretical The most important tools used in collecting insects. practical	Practical lecture, discussion ,	oral examinations
Seventh	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Classification of insects with and without development, with examples of their orders. theoretical A field tour to collect information about the different types of insect orders. Practical	Practical lecture, discussion ,	oral examinations
Eighth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Classification of fully developed insects and identifying some examples of their orders. theoretical Dividing the collected insects and placing them into groups according to their modern taxonomic key to enable the student to gain diagnostic skills. practical	Practical lecture and discussion	oral examinations
Ninth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	For complete development, the most important orders are the Coleoptera and the Hymenoptera. theoretical Breeding and propagating cockroaches using modern laboratory methods is practical	Practical lecture, discussion ,	oral examinations
Tenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Complete evolution of the order Diptera and fleas. theoretical Examining the roles of insects in different systems. Practical	Practical lecture and discussion	oral examinations
Eleventh	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Detailed follow-up to predict the sudden increase in insect species, especially migratory ones. theoretical Making slides for various insect devices. practical	Practical lecture, discussion ,	oral examinations
Twelfth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Complete evolution of the order Lepidoptera and Lepidoptera. theoretical - Transformation and its types. practical	Practical lecture and discussion	oral examinations
Thirteenth	2theoretical +3 practical	memorizing, understanding, analyzing, and applying	Environmental factors affecting insect life. theoretical Identifying the types of caterpillars. Practical	Practical lecture, discussion	oral examinations

Fourteenth 2theoretical memorizing, +3 practical understanding, analyzing, and		Modern methods of pest control. theoretical Identify the types of virgins. practical	Practical lecture and	oral examinations		
Fifteenth	2theoretical +3 practical	applying memorizing, understanding, analyzing, and applying	theoretical test2. Practical test 2.	discussion examinati on	writing examination s	
11. Course Evaluation         Attendance 5 + Daily exams and assignments 2 + Reports 3 + Practical exam 15 + Monthly exam 25 = 50 quest The final exam is 20 practical + 30 theoretical         12. Learning and Teaching Resources						
Required textb Main reference	ooks (curricular b s (sources)	ooks, if any)	Book of principles of general entomology 1. Book of general insects			
Recommende (scientific journ		d references	s 1. Entomology book. 2. Insect basics book.			
Electronic References, Websites			The free encyclopedia Some of the agricultural sites interested in the field of insects.			

			Course Description Form		
1.	Course N	Name:			
Safety	and bios	ecurity			
2.	Course (	Code:			
3.	Semester	r / Year:			
The fire	st stage/s	pring semester			
		ion Preparation	Date:		
26/2/2	<u>.</u>				
	-	e Attendance Fo	prms:		
Presenc					
6.	Number	of Credit Hours	(Total) / Number of Units (Total)		
			15 hours. Number of units: 1		
7.		administrator's	name (mention all, if more than on	e name)	
	Name:				
	Email:				
8.	Course	Objectives			
Course	e Object	ives	•Teaching students about	safety, l	biosecurity,
			biological risks, and risk man	agement me	ethodology,
			developing a biosafety progra	m	
9.	Teaching	g and Learning S	Strategies		
Strate	,	,	tion and clarification		
Juale	59	2 Lecture			
		3Student g			
		4D (* 1	lessons in laboratories		
		4Practical			
10. Co	ourse St				
	ourse St Hours		Unit or subject name	Learning	Evaluation
		ructure		Learning method	Evaluation method
		Required Learning			
Week	Hours	Required Learning Outcomes	Unit or subject name	method	method
Week		Required Learning			
<b>Week</b> 1	Hours	Required Learning Outcomes Theoretical	Unit or subject name General objectives of occupational	method	method
10. Co Week 1 2 3	Hours 2	Required         Learning         Outcomes         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and	method     A lecture	method Quiz
Week           1           2           3	Hours           2           2           2           2           2	Required         Learning         Outcomes         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and biological risk control	methodA lectureA lectureA lecture	method Quiz Quiz Quiz
<b>Week</b> 1 2	Hours           2           2           2	Required         Learning         Outcomes         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and	methodA lectureA lecture	method Quiz Quiz
Week 1 2 3	Hours           2           2           2           2           2           2           2           2           2           2           2           2           2           2	Required         Learning         Outcomes         Theoretical         lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and biological risk control Methods of controlling biological	methodA lectureA lectureA lecture	method Quiz Quiz Quiz
Week 1 2 3 4 5	Hours           2           2           2           2           2           2           2           2           2           2           2	Required         Required         Learning         Outcomes         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture         Theoretical         lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and biological risk control Methods of controlling biological risks: Exam Hazardous and biological waste, treatment and disposal methods	methodA lectureA lectureA lectureA lectureA lecture	method Quiz Quiz Quiz Quiz
Week 1 2 3 4 5 6	Hours           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2	RequiredRequiredLearningOutcomesOutcomesTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureExamTheoretical lectureExam	Unit or subject name         General objectives of occupational safety and health         Biosafety, its goals and biosecurity         Biological hazards, diseases and biological risk control         Methods of controlling biological risks:         Exam         Hazardous and biological waste, treatment and disposal methods and decontamination process	method A lecture A lecture A lecture A lecture Exam A lecture	method Quiz Quiz Quiz Quiz Exam
Week 1 2 3 4 5	Hours           2           2           2           2           2           2           2           2           2           2           2           2           2           2	RequiredRequiredLearningOutcomesOutcomesTheoretical lectureTheoretical lectureTheoretical lectureExamTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lecture	Unit or subject name General objectives of occupational safety and health Biosafety, its goals and biosecurity Biological hazards, diseases and biological risk control Methods of controlling biological risks: Exam Hazardous and biological waste, treatment and disposal methods	method A lecture A lecture A lecture A lecture Exam	method Quiz Quiz Quiz Quiz Exam
Week 1 2 3 4 5 6	Hours           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2           2	RequiredRequiredLearningOutcomesOutcomesTheoretical lectureTheoretical lectureTheoretical lectureTheoretical lectureExamTheoretical lectureExam	Unit or subject name         General objectives of occupational safety and health         Biosafety, its goals and biosecurity         Biological hazards, diseases and biological risk control         Methods of controlling biological risks:         Exam         Hazardous and biological waste, treatment and disposal methods and decontamination process         Dealing with laboratory waste,	method A lecture A lecture A lecture A lecture Exam A lecture	method Quiz Quiz Quiz Quiz Exam Quiz

9	2	Theoretical lecture	Biosecurity stakeholders, stakeholders at the international level	A lecture	Quiz	
10	2	Exam	Exam	Exam	Exam	
11	2	Theoretical lecture	Biosafety laboratory principles, safety and biosecurity	A lecture	Quiz	
12	2	Theoretical lecture	Risk management methodology, development of a biosafety program	A lecture	Quiz	
13	2	Theoretical lecture	Elements of a biosafety program	A lecture	Quiz	
14	2	Theoretical lecture	Information security, transfer of biological materials	A lecture	Quiz	
15	2	Theoretical lecture	Combating biological risks	A lecture	Quiz	
11.	Co2urse E	valuation				
	0		0 according to the tasks assigned to or written exams, reports		ich as daily	
12.	Learning a	nd Teaching Res	ources			
Requ any)	ired textbo	oks (curricular b	Occupational health and safety l Ahmed Hazza	Khaled		
Main	references	(sources)	From methodological books, he scientific research	From methodological books, help books, the Internet, and scientific research		
Reco	mmended	d books a	and Scientific journals in basic speci	Scientific journals in basic specializations		
refer	ences (s	cientific journa	als,			
repoi	rts)					
Electronic References, Websites			https://www.emro.who.int/ar/ihr laboratory-biorisk-management.		<u>g-on-</u>	

1. Course Name:

Human rights and democracy

2. Course Code:

3. Semester / Year:

First/ 2023-2024

4. Description Preparation Date:

19/2/2024

5. Available Attendance Forms:

Presence

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

15hours / 2 units

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

Name.

Email:

8. Course Objectives							
Course	Objec	tives					
			Highlighting the	e rights that the individua	al can acquire fro	m the state, an	
			what permeate	S			
			• This is one of	the obligations on it			
			Highlighting the	e concept of democracy,	and the consequ	uent application	
			its representati	on			
			• By a group of	members at all levels			
9. T	eachir	ig and Le	earning Strategies	S			
Strateg		s E E S	trategy Education strategy	tion strategy Education r is one accurate paper r in real time Education res			
Week	Hour		uirad Labraina	Upit or subject	Loorning	Evaluation	
week	HOUI	-	ired Learning	Unit or subject name	Learning method	method	
1	1		lea of rights Human	The concept t of hum rights	The blackboar the video,	• Final Al - Amj Term Exam, Daily and Oral Examination	
2	1	Hum	anrights statem	Human rights in ancie	=	=	

		1	1		
		in	civilizations		
		ancient			
_		civilizations			
3	1	Humanrights	Humanrights statem	=	=
		statementi the	in the		
		Holy Quran	Holy Quran		
4	1	Middle Ages	Middle Ages	=	=
		HumanRights	HumanRights		
		Statement	Statement		
5	1	Human Rights	Statement of	=	=
		Statement	the role of		
		In modern	organizations		
		Thought	Non –		
			governmental		
			Field		
			human rights		
6	1	Human Rights	Human rights in	=	=
		Statement	the era		
		In the modern era	Talking at the		
		At the level	level		
		revolution	Revolution and		
		and laws	laws		
7	1	The statement	suThe statement	=	=
		contemporary	contemporary		
		recognition of hum	recognition of hum		
		rights	rights		
8	1	Exam	Exam	Exam	Exam
9	1	Statement of the	International	=	=
		international	recognition of		
		recognition of human	rights		
		rights yet	Man after		
		World War II	Wk orld War II		
10	1	The role of	Statement of	=	=
		NGOs in the	the role of		
		field of human	organizations		
		rights	Non –		
			governmental		
			Field		
			human rights		
11	1	Statement of the role	Statement of the	=	=
		organizations	role of organizations		
		Non	Non –		
		-governmental	governmental		
		Field	Field		
		human rights	human rights		
	1 4	Historical introducti	Dul Historical	=	=
12	1				
12	1	to	introduction to		
12	1		introduction to The idea of democrac		
12 13	1	to		=	=
		to The idea of democra	The idea of democrac	=	=

			1				1		
14	1	Types of	Types	of		=	=		
		Democracy	democ	racy					
15	1	Democratic	Demo	cracand	hum	=	=		
		differenceand hun	rights						
		rights	C						
11. Co	11. Course Evaluation								
	Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc								
12. Lea	arning and	d Teaching Resources							
Require	d textbool	ks (curricular books, if	anv)	Human Rights Writer, d. Hamid					
				Hanoun Khaled					
Main ref	erences (	sources)		Democracy and human					
				rights, d. Abdul Majeed Al -Hakim					
Recom	mended	books and refe	erences						
(		non-onto N		nothing					
(scientifi	c journals	, reports)							
Electron	ic Referer	nces, Websites		There is a set of research that					
				deals with	demo	ocracy And			
				human righ	hts				

1. Course Name:

# Baath system crimes

2. Course Code:

3. Semester / Year:

The first course/ for the year 2023-2024

4. Description Preparation Date:

19/2/2024

5. Available Attendance Forms:

Presence

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

15 hours / 2 units

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

Name:

Email:

8. Course Objectives

Course Objectives	<ul> <li>Highlighting the most important</li> </ul>
	resurrection crimes in Iraq, from
	Psychological crimes, social
	crimes and environmental crimes.
	<ul> <li>Educating students on the effects of</li> </ul>
	the crimes of the system
	Resurrection

9. Teaching and Learning Strategies

#### Strategy

57	Cooperative learning strategy Learning strategy brainstorming Learning strategy is one accurate paper Learning strategy in real time Learning strategy notes chain
----	--

# 10. Course Structure

W	eek	Hours	Required Learning	Unit or subject	Learning	Evaluation
			Outcomes	name	method	method
1		1	Statement of the most important crimes committed	Introduction to syste crimes Resurrection	The blackboar the video, Port Point Laws, Pictures	Exam,Daily
				I I I I I I I I I I I I I I I I I I I	]	
----	---	---	--	---------------------------------------	---	
-		by the Baath regime				
2	1	Definition of crimes	The concept of crimes	=	=	
3	1	Explanation of the sections of crime	Crime sections	=	=	
4	1	Explain the types of crimes International	Types of internationa crimes	=	=	
5	1	Statementstatemissued by theSupremeCriminal Court	Decisions issued by th Supreme Criminal Court	=	=	
6	1	Psychological crime statement	Psychological crime statement	=	=	
7	1	Statement of social crimes	Social crimes	=	=	
8	1	Exam Extend				
9	1	A statement of violat of laws Iraqi	A statement of violati of laws Iraqi	=	=	
10	1	Pictures of violation rights Human and power crimes	Pictures of violation eum of rights Human and power crimes	=	=	
11	1	Explain the decisions violations Political and military	Violations decisions Political and military For the Baath system	=	=	
12	1	Military pollution statement And radiation and an explosion Mine	Military pollution statement And radiation and an explosion Mine	=	=	
13	1	Statement of the destruction of cities and villages (Earth policy Burned)	Statement of the destruction of cities and villages (Earth policy Burned)	=	=	
14	1	Justice bulldozing statemen And the marshes and trees	Grading orchards And the marshes and trees	=	=	
15	1	Explanation of the events of the genocide The collective committed from The Baathist regime in Iraq	The events of the grav of extermination The collective committed from The Baathist regime in Iraq	=	=	

11. Course Evaluation

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

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The Book of the Crime of the
	Baath System
Main references (sources)	Ayman Abdel Aziz Salama, the
	state's responsibility for
	committing genocide
Recommended books and references	Dr Ali Hanoush, the problems of
(scientific journals, reports)	the present and the future
	options, a study in environmental
	pollution.
Electronic References, Websites	There are many electronic sources on a
,	network
	The Internet, on the subject of crimes in
	general
	And Baath crimes in particular

1. (	1. Course Name:							
Arab	Arabic Language							
2. (	2. Course Code:							
3. S	3. Semester / Year:							
The	first st	age/spring ser	mester					
4. I	Descrip	tion Preparation	on Date:					
26/2	2/2024							
5. A	Availat	ole Attendance	Forms:					
	Pres							
			· · · ·	Number of Units (T	otal)			
0011	00151	umber of unit		antion all if more	than and	nomo		
	Vame:	auministrati	or s name (n	nention all, if more	e than one	name)		
	Email:							
		Objectives						
Course O		•		• Teaching the	e student gr	ammar and		
		-		parsing, as well as rhet	-			
9. T	eachir	ng and Learnir	ng Strategies					
Strategy		1 Explan	ation and cla	rification				
		2 Lecture	e method					
		3Student	0 1	1 / 1				
40.0			ll lessons in la	aboratories				
10. Co	urse S	Structure						
Week	Hours	Required	Unit or subje	ct name	Learning	Evaluation		
		Learning			method	method		
		Outcomes						
1	2	Theoretical lecture	Rhetoric i	n the Holy Quran	A lecture	Quiz		
2	2	Theoretical lecture	Interpretatio	on of twenty verses	A lecture	Quiz		
3	2	Theoretical lecture	Arabic / Gr	ammar and parsing	A lecture	Quiz		
4	2	Theoretical lecture	The subjec	t and the predicate	A lecture	Quiz		
5	2	Exam		Exam	Exam	Exam		
6	2	Theoretical lecture		Copiers	A lecture	Quiz		
7	2	Theoretical	Imp	erfect verbs	A lecture	Quiz		
		lecture						

8	2	Theoretical lecture	Effects	A lecture	Quiz		
9	2	Theoretical lecture	preparation	A lecture	Quiz		
10	2	Exam	Exam	Exam	Exam		
11	2	Theoretical lecture	Hamza and dictates	A lecture	Quiz		
12	2	Theoretical lecture	Rules for writing ta'	A lecture	Quiz		
13	2	Theoretical lecture	Ages of Arabic literature	A lecture	Quiz		
14	2	Theoretical lecture	Old poetry	A lecture	Quiz		
15	2	Theoretical lecture	Writing common mistakes	A lecture	Quiz		
11.	Co2urs	e Evaluation					
	0		0 according to the tasks assigned to or written exams, reports		uch as daily		
12.	Learning	g and Teachin	g Resources				
Requi any)	red textboo	oks (curricular bo	ook Arabic language Rafid Sabbah	00			
Main r	references	(sources)	From methodological books, he scientific research	From methodological books, help books, the Internet, and scientific research			
Reco	mmended	books a	nd Scientific journals in basic speci	Scientific journals in basic specializations			
refere	ences (s	cientific journa	ıls,				
report	ts)	-					
Electro	onic Refere	ences, Websites	https://www.wuduh1.com/2023/	10/books-arab	<u>ic.html</u>		

	Course Description Form							
1.	1. Course Name:							
Zoology								
2.	2. Course Code:							
3.	Semeste	er / Year:						
The	e first st	age/spring sei	mester					
4.	Descrip	tion Preparati	on Date:					
26/	2/2024							
5.	Availab	le Attendance	Forms:					
	Prese							
			urs (Total) / Number of Units (T	'otal)				
		Number of unit		than and	nomo			
	Name:		or's name (mention all, if more	e man one	name)			
	Email:							
		Objectives						
	Objective	-	Teaching the st	tudent about zo	ology and its			
			relationship to other sci	ences.				
9	Teachin	ig and Learnir	ng Strategies					
Strategy	,	1 Explan	ation and clarification					
		2 Lecture						
		3Student						
10.0			al lessons in laboratories					
		tructure						
Week	Hours	Required	Unit or subject name	Learning	Evaluation			
		Learning		method	method			
1	2	Outcomes	7 la ser en dita nalationalin de					
1	2	Theoretical lecture	Zoology and its relationship to other sciences	A lecture	Quiz			
2	2	Theoretical	The importance of studying	A lecture	Quiz			
3	2	lecture Theoretical	zoology Animal cell, its features and	A 1				
		lecture	components	A lecture	Quiz			
4	2	Theoretical lecture	Cellular division	A lecture	Quiz			
5	2	Exam	Exam	Exam	Exam			
6	2	Theoretical lecture	Protoplasm and its chemical and physical properties	A lecture	Quiz			
7	2	Theoretical	Classification and scientific	A lecture	Quiz			
		lecture	nomenclature					

8	2	Theoretical lecture	Digestion, assimilation and absorption	A lecture	Quiz		
9	2	Theoretical lecture	Elementary Division	A lecture	Quiz		
10	2	Exam	Exam	Exam	Exam		
11	2	Theoretical lecture	Intestinal coelom division	A lecture	Quiz		
12	2	Theoretical lecture	Porosity Division	A lecture	Quiz		
13	2	Theoretical lecture	Division of flatworms	A lecture	Quiz		
14	2	Theoretical lecture	Phylum Bagworms	A lecture	Quiz		
15 2 Theoretical lecture			Division of annelids	A lecture	Quiz		
11.	Co2urs	e Evaluation					
	U		according to the tasks assigned to or written exams, reports		uch as daily		
12.	Learning	g and Teaching	g Resources				
Requi any)	red textbo	oks (curricular bo	ok Zoology George Haddad				
Main	references	(sources)	From methodological books, he scientific research	From methodological books, help books, the Internet, and scientific research			
Reco	mmended	l books a	nd Scientific journals in basic spec	Scientific journals in basic specializations			
refere	ences (s	cientific journal	ls,				
repor	ts)	-					
Electr	onic Refere	ences, Websites	https://angelo.libguides.com/bio	https://angelo.libguides.com/biology/zoology/websites			

	ourse Name: organ	nic chemistry					
Organio	c chemistry						
2. Co	ourse Code:						
<b>3</b> . Se	emester / Year: Fi	st					
4. De	escription Prepara	tion Date: 2023-2	2024				
5. A	vailable Attendand	e Forms: In pers	on + electronic				
			mber of Units (Total)				
N	umber of Credit H	lours (Total) 75 h	ours				
		itor's name (me	ntion all, if more than one name)				
	ame: Email:						
	ourse Objectives						
Course Ob	2- I 3- I 4- E	ntroducing studer ntroducing studer Explaining to stud	s with general information about analytical ch hts to ways to express concentrations and their hts to strong and weak acids and bases ents what Buffer's solutions are and their typ hts to the definition of salts and their types, w	ir types bes, with examples			
9. Te	aching and Learr	ning Strategies					
Strategy	Strategio	teaching and le	earning methods				
	Audio met	hods (teaching e	explanation of the topic)				
		riting on the b					
	The meth	nod of direct di	ialogue between the teacher and the s				
		The method of direct dialogue between the teacher and the student, with the s					
		n in class particip	-	student, wi	ith the stud		
10 0	Conduct	ı in class particip experiments.	-	student, wi	th the stud		
IU. COUL	Conduct	n in class particip experiments.	-	student, wi	ith the stud		
10. Cour Week			-	student, wi	ith the stud		
	rse Structure	experiments.	pation				
	rse Structure	experiments. Required Learning	pation	Learning	Evaluation		
	rse Structure	experiments.	pation	Learning	Evaluation		
Week The first	Hours 2Theoretical	experiments. Required Learning	Unit or subject name  1 Introduction to organic chemistry and its importance, chemical bonds, bases and acids. Experiment No. 1. Preparation	Learning	Evaluation method Exams , reports, discussions		

		according to the IupAc system, physical properties. Their reactions Experiment No. 3 Preparation of alcohols	discussions
fourth week	2Theoretical 3 Practical	4 Unsaturated hydrocarbons, alkynes, introduction, general law, nomenclature according to the IupAc system, physical properties. Their reactions Experiment No. 4 Preparation of acetone	
The fifth week	2Theoretical 3 Practical	5 First month exam, Experiment No. 5, studying the properties of acetone	Exams, reports, discussions
the sixth week	2Theoretical 3 Practical	6 Alcohols, introduction, general law, nomenclature according to the IupAc system, physical properties. Their interactions Experiment No. 6 Study of the properties of aldehydes	Exams , reports, discussions
Seventh week	2Theoretical 3 Practical	7 Ethers, introduction, general law, nomenclature according to the IupAc system, physical properties. Their interactions Experiment No. 7 Study of the properties of ketones	
The eighth week	2Theoretical 3 Practical	8 Aldehydes, introduction, nomenclatur according to the IupAc system, physica properties. Their reactions Experiment No. 8 Preparation of carboxylic acid	
Week nine	2Theoretical 3 Practical	9 Ketones, introduction, nomenclature according to the IupAc system, physica properties. Their interactions Experimen No. 9 Preparing aspirin	
The tenth week	2Theoretical 3 Practical	10 Distinguishing between aldehydes and ketones Experiment No. 10 Detecting carbon	Exams , reports, discussions
Week eleven	2Theoretical 3 Practical	11 Carboxylic acids and their derivatives, their interactions, Experiment No. 11, Classification of oil and fats	Exams , reports, discussions
The twelfth week	2Theoretical 3 Practical	12 Second month exam Experiment No. 12 Calculating oils and fats	Exams , reports, discussions
The thirteenth week	2Theoretical 3 Practical	13 Al-Muhaddith: Knowing the importance of organic fertilizers and preparing organic plant fertilizers	Exams, reports, discussions
The fourteenth week	2Theoretical 3 Practical	14 Updated: Linking organic materials t improving crop productivity. Preparing organic animal fertilizers	
The fifteenth week		15 Al-Muhaddith Decomposition of organic matter Decomposition of plant and animal organic fertilizers	
Distributing oral, monthl	se Evaluation the score out of 100 ac by, or written exams, repo ing and Teaching Resour		as daily preparation, daily
	xtbooks (curricular books	if any) Pasto,D.; Johnson,C. and M	Ailler, M. (1992). Experments c Chemistry; Prentice Hall rsey 07632, USA
Main referer	nces (sources)	From methodological boo scientific research	ks, help books, the Internet,
Recommer journals, rep		erences (scientific Iraqi Scientific journals in b	asic specializations

Electronic References, Websites	Al-Muthanna University e-learning website
	https://agr.mu.edu.iq/

s of this de
Evaluatio
n method
the exam
the exam
the exam
the exam
the exam
the exam the exam
the exam

Sixth	2	Practical Example	Computer Fundamentals	Practical session	the exam
Seventh	2	Practical Example	Computer Fundamentals	Practical session	the exam
Eighth	2	Introduction to windows 7	Computer Fundamentals	Explanation, presentation of model and lecture	the exam
Ninth	2	User interface and relative processes	Computer Fundamentals	Explanation, presentation of model and lecture	the exam
Tenth	2	Computer components (partitions, folders, and files)	Computer Fundamentals	Practical session	the exam
Eleventh	2	Practical Example	Computer Fundamentals	Practical session	the exam
Twelfth	2	Start menu and taskbar	Computer Fundamentals	Explanation, presentation of model and lecture	the exam
Thirteenth	2	Control panel	Computer Fundamentals	Explanation, presentation of model and lecture	the exam
fourteenth	2	Practical Example	Computer Fundamentals	Practical session	the exam
Fifteenth	2	Practical Example	Computer Fundamentals	Practical session	the exam
11. Course	e Evalua	tion			
<ol> <li>1- Theoretica</li> <li>2- Practical</li> <li>3- Reports a</li> <li>4- Final examination</li> </ol>	tests nd studie m	25 15 s 10 50 eaching Resources			
	•				
Required books, if an		s (cume			
			ter course book(Free - Edition 8.0 (1 Ma	e University of Bolzano rch 2016)).	Bozen – Dr.
Recommer references	(	oks and scientific			
journals, rep					
Electronic R	eferences	s, Websit			

1. Course	Name:					
General plant b	asics					
2. Course	Code:					
3. Semester / Year:						
2024						
	tion Prep	aration Date:				
01/09/2024						
	le Attend	lance Forms:				
Attend						
		t Hours (Total) / Number of	Units (Total)			
	umber of	units 3 strator's name (mention all	if more than one na	ame)		
Name:	damine					
Email:						
0.0						
8. Course						
Course Object	tives •	Researches general botany	on the principles adop	ted in plant stylin	g and the applie	
	fi	elds of botany and the relat	tionships between pla	ants		
	•	t includes knowledge of the different plant organs through which the general plant				
	b	e developed	developed			
	•	Knowing the vegetative and	ving the vegetative and reproductive characteristics and their importance in			
	g	eneral plants				
	•	Methods used in general pla	ants			
	•	Study the evolutionary impo	rtance of reproductive	organs		
	•	Study of monocotyledonous	and dicotvledonous p	lants		
9. Teachin		arning Strategies	, , , , , , , , , , , , , , , , , , , ,			
Strategies	9	Ask students inferential	questions			
6		Establishing training	•			
		• •			on counter in th	
		C C	Finding solutions to the problems and obstacles that students encounter in th			
		practical part				
		Enabling students to f	find solutions and appl	ications for crisis	situations	
10. Course S	tructure					
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation	
		Outcomes	name	method	method	
the first	5	Required educational outcomes	Explanations, presentation of the model and lecture	Attend	a daily test	
the second	5	A historical overview botany, its study, and importance of plants humans	1 /	Attend	a daily test	
the third	5	Departments of botany	Explanations,			
the unit of Deputitions, Deputitions,						

the fourth		plant characteristics - t		presentation of	Attend	a daily test
the fourth		plants	21	model and lecture		,
I	5	Inorganic c	chem	Explanations,		
		compounds in plants a	and t	presentation of	Attend	a daily test
		types		model and lecture		
Fifth	5	Organic c	chem	Explanations,		
		compounds in plants a	and t	presentation of	Attend	a daily
		types		model and lecture		
VI	5	Organic compoun	nds	Explanations,		
		plants and their types		presentation of the model and lecture	Attend	a daily test
Seventh	5	Plant physiology,		Explanations,		
		photosynthesis, respira	ation	presentation of the	Attend	a daily test
		transpiration, absorption	on	model and lecture		
VIII	5	Plant anatomy, cell, tis	ssue,	Explanations,		
		plant organs		presentation of the	Attend	a daily test
				model and lecture		
Ninth	5	Plant classification n		Explanations,		
		plant composition, pla	4	presentation of the	Attend	a daily test
		use of plant families, a	and	model and lecture		
		method of cultivation		<b>P</b> 1		
The tenth	5	Factors affecting plan		Explanations,	A., 1	1 11
		growth, gases, nutrient	ts,	presentation of the	Attend	a daily test
<b>F</b> 1 4	~	growth regulators		model and lecture		
Eleventh	5	Plant aggregates, back	teria	Explanations,	A ((	- 4-11-
		echinoderms, fungi		presentation of the	Attend	a daily
Translaus (la	~	Dlant		model and lecture		
Twelveth	5	0 1	mone	Explanations,	Attend	a daily tast
		gymnosperms		presentation of model and lecture	Attella	a daily test
Thirteenth	5	Plant aggregates cove	arad	Explanations,		
Thinteenthi	5	with seeds	cicu	presentation of the	Attend	a daily test
		with secus		model and lecture	Attend	a daily test
fourteenth	5	Genetics in plants		Explanations,		
	5	Concues in plants		presentation of the	Attend	a daily test
				model and lecture		a during tost
Fifteenth	5	Genetics in plants		Explanations,		
	5	Concues in pluits		presentation of the	Attend	a daily test
				model and lecture	1 1000110	
11. Course Ev	aluation					
•		ut of 100 according to		U U	e student such a	as daily
<u>^</u>	•	onthly, or written exam	is, rep	ortsetc		
		ning Resources			1	1 4 1 1 1 1 1 1 1 1
Required textbo	oks (curri	cular books, if any)		Basics of general p Naghi, Wafaa Mah	rous, Amer, Ade	el Ahmed Fathi
Main references	(sources	)	Recent articles from the Internet and from specialized			
	,			scientific journals,		ltural Sciences
				Journal, and the vir		
Recommended	books	and references		Iraqi academic scie	entific journals	
(scientific journa	lls, report	s)				
Electronic Refer	ences M	/ebsites		General plant		
EICOUDE REIER				•		

		Course I	Description Form				
1. Course l	Name:						
Basics of garden	ing and lan	dscaping					
2. Course	Code:						
3. Semeste	er / Year:						
First / First Seme	ster						
4. Descript	tion Prepar	ation Date:					
01/09/2024							
5. Availab	le Attendar	ce Forms:					
Attend 6. Number	of Credit 1	Hours (Total) / Number of U	Inits (Total)				
0. Indilider		iours (rotar) / Number of C	Sints (Total)				
	s Number						
	administr	ator's name (mention all,	if more than one name)				
Name: Email:							
8. Course	Objectives	;					
Course Objecti	ves	Introducing the second se	ne student to the vario	us horticultural o	rops, their econo		
		nutritional, me	dical and aesthetic in	nportance, metho	ods of cultivation		
		production, and	d identifying various h	orticultural facili	ties and methods		
		establishing or	chards.				
		• Knowledge of horticulture departments					
		-	Know the difference between horticultural crops and field crops				
		<ul> <li>Identify the factors affecting the success of growing horticultural crops</li> </ul>					
		<ul> <li>Identify the factors determining the establishment of orchards</li> </ul>					
		<ul> <li>Learn how to create public and private parks and plant tre</li> </ul>					
			in cities and central isla	-			
0 Toophin	a and L aar	ning Strategies					
Strategies	y and Lear						
Sualegies		Introducing the st	udent to the various h	orticultural crops,	their econo		
		nutritional, medical and aesthetic importance, methods of cultivation production, and identifying various horticultural facilities and methods					
		establishing orchard		cultural facilities a	and methods		
		6					
10. Course St	ructure				_		
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation		
		Outcomes		method	method		
the first	5	Learn about horticulture, the	horticulture, the	Attend	a daily test		
		history of the development of	history of the development of				
		horticulture, its	horticulture, its				
		economic and nutritional	economic and nutritional				
		importance	importance				
the second	5	Learn how to di	-				
		horticultural plants	_	Attend	a daily test		
the third	5	Identify environme	environmental factors				
	1-				1		

		factors and their im on the production horticultural crops	produc	impact on tion ltural crops	Attend	a daily test
the fourth	5	Identify the methods reproduction horticultural pl (sexual, asexual)	the reprodu horticu	methods	Attend	a daily test
Fifth	5	Identifying nurseries field farming patterns	nurseri farmin	es and f g patterns	Attend	a daily to
VI	5	Learn about agricult and horticult processes		tural and ltural processes	Attend	a daily test
Seventh	5	Learn about agricultur under air-conditioned environments		ture under air- oned environme	Attend	a daily test
VIII	5	Getting to know the ge marketing	the gen	ie, marketing	Attend	a daily test
Ninth	5	Learn about care and storage	care and storage		Attend	a daily test
The tenth	5	Learn about breeding a improving horticultura plants	breeding and improvin horticultural plants		Attend	a daily test
Eleventh	5	Learn about garden architecture and design	garden design	architecture an	Attend	a daily te
Twelveth	5	Learn about ways exploit spaces and roof buildings by grow horticultural plants	a ways to exploit sp and roofs of buildings growing horticult plants		Attend	a daily test
Thirteenth	5	Identify windbreaks an their role in reducing desertification conditio		eaks and their r in 1g desertificat 0ns	Attend	a daily test
Fourteenth	5	Learn how to use mod mechanization to se horticultural plants	mechai	use modern nization to serve ltural plants	Attend	a daily test
Fifteenth	5	Identifying (medicinal aromatic plants, fruit trees, vegetable plants, ornamental plants)	(medicinal and aromat plants, fruit trees, vegetable plants, ornamental plants)		Attend	a daily test
11. Course E	valuation					
monthly, or writ	ten exams,	f 100 according to the tasks reports etc	assigned	to the student suc	ch as daily prep	paration, daily oral,
12. Learning a		÷				
•	•	ılar books, if any)		<b>TT</b> .1 1. <b>T</b>	<b>T</b> 1 1 <b>V</b> ~	1
Main references	. ,	al materia and the standard state		Horticulture Dr. Hussein Ali Gha		aloumi, Mr. Hossam
reports)	DOOKS an	id references (scientific jou	urnais,			
Electronic Refer						

#### **Course Description Form** 1. Course Name: English language 2. Course Code: 3. Semester / Year: The first stage/ first semester 4. Description Preparation Date: 26/2/2024 5. Available Attendance Forms: Presence 6. Number of Credit Hours (Total) / Number of Units (Total) 30 hours. Number of units: 2 7. Course administrator's name (mention all, if more than one name) Name: Email: 8. Course Objectives **Course Objectives** • Teaching the student the basics of the English language 9. Teaching and Learning Strategies 1 Explanation and clarification Strategy 2 Lecture method 3Student groups 4Practical lessons in laboratories 10. Course Structure Week Hours Required Unit or subject name Learning method Evaluation method Learning **Outcomes** Theoretical Basics of the English 2 1 A lecture Quiz lecture language 2 2 Theoretical Pronouns A lecture Quiz lecture Theoretical 2 3 Pronouns A lecture Quiz lecture 4 2 Theoretical auxiliary verbs A lecture Quiz lecture 2 5 Exam Exam Exam Exam 2 Theoretical 6 Verb rules A lecture Quiz lecture Theoretical 7 2 Verb rules A lecture Quiz lecture 2 8 Theoretical Noun rules A lecture Quiz

		lecture			
9	2	Theoretical lecture	Noun rules	A lecture	Quiz
10	2	Exam	Exam	Exam	Exam
11	2	Theoretical lecture	Adjective rules	A lecture	Quiz
12	2	Theoretical lecture	Adjective rules	A lecture	Quiz
13	2	Theoretical lecture	auxiliary verbs	A lecture	Quiz
14	2	Theoretical lecture	auxiliary verbs	A lecture	Quiz
15	2	Theoretical lecture	auxiliary verbs	A lecture	Quiz

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

12. Learning and Teaching	g Resources
Required textbooks (curric	Writing Academic English, Level 1 by Alice Oshima
books, if any)	
Main references (sources)	From methodological books, help books, the Internet, and scientific research
Recommended books and	Scientific journals in basic specializations
references (scientific journals,	
reports)	
Electronic References, Websites	https://www.ef.com/wwar/blog/language/dystopian-books- to-learn-english/

		Course Desc	•			
1. Co	urse Name	:				
Computer f	undamenta	als 2				
2. Co	urse Code:					
3. Ser	nester / Ye	ear:				
Second						
4. Des	scription P	reparation Date:				
3\7\2024						
5. Av	ailable Att	endance Forms:				
Act	ual prese	nce				
		redit Hours (Total) / Number of Un	its (Total)			
		imber of Units 3	more then one nom			
	me:	inistrator's name (mention all, if	more than one ham	e)		
	nail:					
8. Cou	urse Obje	ctives				
Course Ob	jectives	• The student gets to know Mic	crosoft access in detail	S.		
		• The student should know adv	antages of using Micr	osoft access in real life		
		• The student should apply ma	ny commends and pro	cesses on Microsoft ac	cess.	
9 Tea	ching and	Learning Strategies	,			
Strategy		1- Explanation and clarificati	ion			
Sualegy		2- Practical lessons.				
		3- Self-learning method.				
40 0	01					
	10. Course Structure					
Week		-				
	Hours	Required Learning Outcomes	Unit or subject	Learning method	Evaluatio	
		Required Learning Outcomes	name		n method	
First	Hours 2	-	name Microsoft	Explanation,		
First		Required Learning Outcomes	name	Explanation, presentation of	n method	
First		Required Learning Outcomes	name Microsoft	Explanation,	n method	
First		Required Learning Outcomes	name Microsoft access Microsoft	Explanation, presentation of model and lecture Explanation,	n method	
	2	Required Learning Outcomes         Introduction to Microsoft access	name Microsoft access	Explanation, presentation of model and lecture Explanation, presentation of	n method Exam	
second	2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface	name Microsoft access Microsoft access	Explanation, presentation of model and lecture Explanation, presentation of model and lecture	n method Exam Exam	
	2	Required Learning Outcomes         Introduction to Microsoft access	name Microsoft access Microsoft	Explanation, presentation of model and lecture Explanation, presentation of	n method Exam	
second	2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups	name         Microsoft         access         Microsoft         access         Microsoft         access	Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation, presentation of model and lecture	n method Exam Exam Exam	
second	2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface	nameMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft access	Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation,	n method Exam Exam	
second	2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups	name         Microsoft         access         Microsoft         access         Microsoft         access	Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation, presentation of model and lecture	n method Exam Exam Exam	
second	2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups	nameMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft access	Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation, presentation of model and lecture Explanation, presentation of model and lecture	n method Exam Exam Exam	
second third fourth	2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups         Tabs and groups	name         Microsoft         access         Microsoft         access         Microsoft         access         Microsoft         access         Microsoft         access	Explanation, presentation of model and lectureExplanation, presentation of model and lectureExplanation, presentation, presentation of model and lectureExplanation, presentation, presentation, presentation, presentation, presentation, presentation, presentation, of model and lectureExplanation, presentation, presentation, presentation, of model and lecture	n methodExamExamExamExam	
second third fourth Fifth	2 2 2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups         Tabs and groups         Tabs and groups	nameMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft access	Explanation, presentation of model and lectureExplanation, presentation of model and lectureExplanation, presentation, presentation of model and lectureExplanation, presentation, presentation, of model and lectureExplanation, presentation, presentation, of model and lectureExplanation, presentation, of model and lectureExplanation, presentation, of model and lectureExplanation, presentation, of model and lecture	n methodExamExamExamExamExam	
second third fourth	2 2 2 2 2 2	Required Learning Outcomes         Introduction to Microsoft access         Access main interface         Tabs and groups         Tabs and groups	nameMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft accessMicrosoft access	Explanation, presentation of model and lectureExplanation, presentation of model and lectureExplanation, presentation, presentation of model and lectureExplanation, presentation, presentation, presentation, presentation, presentation, presentation, presentation, of model and lectureExplanation, presentation, presentation, presentation, of model and lecture	n methodExamExamExamExam	

				access		
Eighth	2	Tables		Microsoft access	Explanation, presentation of model and lecture	Exam
Ninth	2	Practical	Example	Microsoft	Practical Example	Exam
Tenth	2	Queries		Microsoft access	Explanation, presentation of model and lecture	Exam
Eleventh	2	Practical	Example	Microsoft access	Practical session	Exam
Twelfth	2	Reports		Microsoft access	Explanation, presentation of model and lecture	Exam
Thirteenth	2	Control j	panel	Microsoft access	Explanation, presentation of model and lecture	Exam
fourteenth	2	Practical	Example	Microsoft access	Practical session	Exam
Fifteenth	2	Practical	Example	Microsoft access	Practical session	Exam
11. Cours	e Evalu	ation		1		
<ol> <li>1-Theoretic</li> <li>2- Practical</li> <li>3- Reports a</li> <li>4- Final example</li> </ol>	tests and studi m	ies 5	25 15 10 0			
12. Learni	ng and	Teaching R	esources			
Required	textboo	oks (curric				
books, if an	ıy)					
Main refere	nces (so	ources)	HEA	rosoft Access 2010 bo LTH SYSTEM). ures of Microsoft Access 2	ok(UNIVERSITY OF 010 prepared by Eng.M.At	VIRGINIA
Recomme	nded bo	ooks and				
references		(scientific				
journals, re	ports)	•				
Electronic R	Referenc	es, Websit	https://support	.microsoft.com/ar-		
			sa/office/%D8%	%A7%D9%84%D9%85	%D9%87%D8%A7%D9	9%85-
			%D8%A7%D9	9%84%D8%A3%D8%B	3%D8%A7%D8%B3%I	09%8A%D8
			A9-%D9%81%	6D9%8A-access-2010-26	8acfed-2484-4822-acb3-	

1. (	1. Course Name:					
Statis	tics					
2. (	2. Course Code:					
3. 5	3. Semester / Year:					
Spring	Seme	ster / secondary				
4. I	Descrip	otion Preparation Date	:			
12/2	/ 2024	1				
5. A	Availal	ole Attendance Forms	:			
Ι	n a pre	esent way				
6. ľ	Numbe	er of Credit Hours (To	tal) / Nur	nber of Unit	ts (Total)	
6	50 hou	rs / 3 units				
7. (	Course	e administrator's nai	me (mer	ition all, if r	nore than one	e name)
Name: Email:						
8. C	Course	Objectives				
Course (	Objecti	ves		1- Graduation rep		ng reality
9. T	eachi	ng and Learning Strat	egies			
	Strategy       1. Mathematical exercises and problems. Assigning the student to some group activities and duties.         2. Allocate a percentage of the grade to daily assignments and tests.         3. Information on the Internet.         4 Practical experiences in research stations affiliated with the College of Agriculture.					
10. Co	ourse S	Structure				
Week	Hours	Required Learning	Unit or s	ubject	Learning	Evaluation
		Outcomes	name		method	method

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	$ \begin{array}{c} 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\ 4 \\$	Memorize, understand, analyze, apply Memorize, understand, analyze, apply Memorize, understand, analyze, apply Memorize, understand, analyze, apply Memorize, understand, analyze, apply	<ol> <li>A historical overview, definition, importance and applications of statistics</li> <li>Introducing statistical terminology and methods for obtaining random samples</li> <li>Tabular and graphical presentation</li> <li>Concentration metrics</li> <li>How to make a frequency distribution table</li> <li>Measures of relative dispersion</li> <li>The relationship between the arithmetic mean, median, and mode</li> <li>T-test and F-test</li> <li>Simple regression</li> <li>Correlation</li> <li>Probability distributions</li> <li>Nermed distributions</li> </ol>	Presence presence presence presence presence presence presence presence presence presence presence presence	Daily tests Daily tests
			2	-	

#### 11. Course Evaluation

Attendance 5 + daily exams and assignments  $2 + \text{reports} 3 + \text{practical} \exp 15 + \text{monthly} \exp 25 = 50$  pursuit, final exam 20 practical + 30 theoretical.

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to Statistics - Khashi Muhammad Al-Rawi
Main references (sources)	Principles of Statistics - Ahmed Abdel Samie 2008
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

1.	Course Name:
Me	edical and veterinary entomology
2.	Course Code:
3.	Semester / Year:
Fir	st semester/second year

4. Description Preparation Date:

14/2/2024

5. Available Attendance Forms:

present way

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

60 hours / 3 units

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

Name:

Email:

	8. Course Objectives
Course Objectives	<ul> <li>The student will acquire cognitive skills about the concepts of the relationshill insects to human and animal health, an introduction to the science of medic entomology, methods of transmitting pathogens, the medical importance of the orders of cockroaches, lice, dipteras, spiders, bedbugs and fleas and method combating them, toxic pests and their relationship to environmental health.</li> <li>Also know the classification of medicinal insects according to their importance humans and animals and according to the type of host on which they feed</li> <li>Knowing the Arabic name of medical insect pests, scientific name, family, ord economic importance, and life cycle <ul> <li>In addition to studying all insects that infect humans and animals</li> <li>Identify the harmful phase and symptoms and signs of infection</li> </ul> </li> </ul>

### 9. Teaching and Learning Strategies

Strategy A - Cognitive objectives
A1- Learn about the concept of medical insects and methods
diagnosing them
A2- Learn about ways to combat these insects and methods
preventing them
A3- Learn about the concept of medical entomology and
controlling the danger of these insects to public health
A4- Learn about the nature of the damage and losses caused
medical insects in the general environment and what these
insects cause to public health

		A6-Desc B1 - Know B2 - En possibility c	ribe the life cycle of animals and iden B - The progra ving the concept of in hot e habling students to of isolating and dia nt's ability to estim	ith these insects of insects that in tify the harmful um's skill objecti medical insects, environments diagnose infecti gnosing disease-	fect humans and phase ves especially insec ons and the causing insec B
		10.	Course Structure	;	
Week	Hours	Required	Unit or subject	Learning	Evaluation
		Learning	name	method	method
		Outcomes			
first	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	identification of medical insects and a historical overview of the development of medical insects and the stages they went through. theoretical Introduction to medical and veterinary insects.	Practical lecture, discussion,	oral examinations
second	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	the medical importance of insects, methods of transporting them, and their medical harm. theoretical Mouth parts in medical and veterinary insects (1).	Practical lecture and discussion	oral examinations
Third	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	epidemiology and relationship to med insects. Theoretica Mouth parts in medical and veterinary insects (2).		oral examinations
Fourth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	the Hemipteran order, the Diptera order (division of the order). Cockroaches, types of lice. sand flies and black flies (their types and harms).	Practical lecture and discussion	oral examinations
Fifth	2theoretical +2 practical	memorizing, understanding,	Diagnosing the most important	Practical lecture, discussion,	oral examinations

		analyzing, and applying	phenotypic characteristics by which bedbugs, sandflies, and blackflies are distinguished.		
Sixth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	theoretical test 1. Practical test 1.	examination	writing examinations
Seventh	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	Types Mosquitoes of mosquitoes with an attempt to collect mosquitoes from the field and raise them	Practical lecture, discussion,	oral examinations
Eighth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	the apprehension fly, horse fly, house fly, stable fly Trying to differentiate between a stable fly and a house fly.	Practical lecture and discussion	oral examinations
Ninth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	colored flies, myiasis, and codification. Study of external characteristics to differentiate between colored flies and myiasis	Practical lecture, discussion,	oral examinations
Tenth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	fleas, fleas.Flea cheats and fleas with learning how to collect fleas.	Practical lecture and discussion	oral examinations
Eleventh	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	some small orders with their medical and veterinary importance such as Lepidoptera, Coleoptera, and Hymenoptera. Making slides for parts of some types of medical insects.	Practical lecture, discussion,	oral examinations
Twelfth	2theoretical +2 practical	memorizing, understanding, analyzing, and applying	the sect and arachnids, scorpions, spiders, and dreams. Identifying the types of spiders and their modern types that cause medical and veterinary diseases, especially hard and soft ticks and mites.	Practical lecture and discussion	oral examinations
Thirteenth	2theoretical +2 practical	memorizing, understanding, analyzing, and	the life cycle of some pathogens transmitted by	Practical lecture, discussion,	oral examinations

Fourteenth	2theoretical +2 practical	applyi memori: understar analyzing applyi	zing, nding, g, and	arthropods, leishmaniasis, malaria, and elephantiasis. Learn how to breed mosquitoes and flies. , the second part of the lecture on the life cycle of pathogens. Survey and diagnosis of medical insects present in the area.	Practical lecture and discussion	oral examinations
Fifteenth	2theoretical +2 practical	memoriz understar analyzing applyi	nding, g, and	theoretical test2. Practical test 2.	examination	writing examinations
			11.	Course Evaluation	on	
Attendance 5				nts 2 + Reports 3 + Pa m is 20 practical + 30		Monthly exam $25 =$
		12. Le	arnin	g and Teaching R	Resources	
Required text	Required textbooks (curricular book any)			Abo-Al Hab. , Jalil.1980. Book of medical and veterina insects, theoretical and practical part		
Main references (sources)			1- Al-Tayeb Ali Al-Hajj (Medical and Veterinary Insects)			
Pocomm	andad books	and	2- the guide to medical entomology, Dr. Ali Salit et a 1- Arthropods of medical and veterinary importance in the			
Recommended books and references (scientific journals,		Kingdom of Saudi Arabia Dr. Ali Ibrahim Badawi 2- Disease-carrying insects, written by Jalil Abu Al-Hab				
r	reports)					
Electronic References, Websites				www.emedic www.ext.colosta www.k	scientific encycl ine.com/ped/topi ate.edu/pubs/inse ennedypest.com/ cdicine.cmu.ac.th	c/1292.htm ect/05502.html roach2.html

I	1. Course Name:	A ami aultural	machinamyan	daguinmont
I	I. Course mame:	Agricultural	пастпегу ап	u equipment
I		0	· · · · · · · · · · · · · · · · ·	

2. Course Code:

3. Semester / Year: 2023-2024

4. Description Preparation Date:12-4-2024

5. Available Attendance Forms: present way

6. Number of Credit Hours (60) / Number of Units (3)

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

Name:

Email:					
		8. C	ourse Objective	es	
Course O	bjective	25	• Types of • Typ	combustion er mechanical tra- es of methods	of operating and and how to maintai
		9. Teaching	and Learning S	strategies	
Strategy         • Explaining the importance of using mechanization in providing and achieving high levels of production           • Explaining the modern and advanced method of agriculture through agricultural machinery					
			ourse Structure		
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	name	method	method
1	4	memorizing, understanding, analyzing, and applying	Classification of tractors , Mechanical transmission methods	Theoretical + practical lecture	test
2 4		memorizing, understanding, analyzing, and applying	Internal combustion engine parts	Theoretical + practical lecture	test
3 4		memorizing, understanding, analyzing, and applying	Four – stroke cycle& Two – stroke cycle	Theoretical + practical lecture	test
4 4		memorizing, understanding, analyzing, and applying	Timer devices	Theoretical + practical lecture	test
5	4	memorizing, understanding, analyzing, and applying	Clutch Device	Theoretical + practical lecture	test

6	4	memorizing, understanding, analyzing, and applying	Gearbox and Transmission devices	Theoretical + practical lecture	test
7	4	memorizing, understanding, analyzing, and applying	Fuel System	Theoretical + practical lecture	test
8	4	memorizing, understanding, analyzing, and applying	Cooling System	Theoretical + practical lecture	test
9	4	memorizing, understanding, analyzing, and applying	Lubrication System	Theoretical + practical lecture	test
10	4	memorizing, understanding, analyzing, and applying	Hydraulic devices. Power take - off shaft	Theoretical + practical lecture	test
11	4	memorizing, understanding, analyzing, and applying	Soil preparation equipment	Theoretical + practical lecture	test
12	4	memorizing, understanding, analyzing, and applying	Control equipment - Spraying equipment	Theoretical + practical lecture	test
13	4	memorizing, understanding, analyzing, and applying	Fogging equipment	Theoretical + practical lecture	test
14	4	memorizing, understanding, analyzing, and applying	Sprinkler calibration	Theoretical + practical lecture	test
15	4	memorizing, understanding, analyzing, and applying	Maintenance of control equipment	Theoretical + practical lecture	test
		11 C	ourse Evaluatio	 n	
Attenda	ance $5 + \Gamma$	Daily exams and assignments 50 quest , The final exam i	2 + Reports  3 + Pr	actical exam 15 -	+ Monthly exam 25 =
		12. Learning	and Teaching R	esources	
Req	uired text	books (curricular books, if ar	.,	Agricultural ma	-
Main references (sources)			Huss	ein and Dr. Abdel	uipment. Written by Lotfi Salam Mahmoud e equipment. Written
				by Lotfi Hus m Machinery .J.M.: C.H.Clov	shippen,C.R.Ellin and
Re	commend	led books and references			
	(scientifi	ic journals, reports)			
	Electron	ic References, Websites			

1.	Course ]	Name:
•••	Course	a anno.

Plant physiology

### 2. Course Code:

**3**. Semester / Year:

the first Semester / second year

4. Description Preparation Date:

20 / 2 / 2024

5. Available Attendance Forms:

Present way

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

60 hours / 3 units

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

Name:

Email:

	8. Course Objectives				
Course Objectiv	/es	-Learn about plant physiology			
		-Knowledge of the principles of this plant			
science					
		- The importance of plant physiology			
	9. Teaching and Le	arning Strategies			
Strategy	1 - Presentation of Pow	1 - Presentation of PowerPoint via the Data show screen 2-			
	Electronic presentation via communication platforms 3 -				
	Direct delivery method and detailed explanation				

### 10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	name	method	method
1	4	Memorization, understand practical application	A historical overview of t emergence and developm of physiological science	Lecture and discus	Oral exams
2	4	Memorization, understand	Water relations	Lecture and discus	Quick exam
		practical application			
3	4	Memorization, understand practical application	Plant Cell	Lecture and discus	Oral exams
4	4	Memorization, understand practical application	Anatomy of phloem tissu	Lecture and discus	
5	4	Memorization, understand practical application	Photosynthesis	Written exam	Oral exams

6	4	Memorization, understand practical application	Breathing	Lecture and discus	Quick exam
7	4	Memorization, understand practical application	Growth and development plants	Lecture and discus	Oral exams
8	4	Memorization, understand practical application	Enzymes	Lecture and discus	Quick exam
9	4	Memorization, understand practical application	Nutrients and plant nutriti	Lecture and discus	Oral exams
10	4	Memorization, understand practical application	Transport	Lecture and discus	Oral exams
11	4	Memorization, understand practical application	Root growth	Lecture and discus	Oral exams
12	4	Memorization, understand practical application	For plant hormones	Lecture and discus	Oral exams
13	4	Memorization, understand practical application	Flowering	Written exam	Oral exams

#### 11. Course Evaluation

Attendance 5 + Daily exams and assignments 2 + Reports 3 + Practical exam 15 + Monthly exam 25 = 50 quest , The final exam is 20 practical + 30 theoretical

12. Learning and Teaching Resources					
Required textbooks (curricular books, if any)	. Crop physiology / Dr. Abdul Hameed				
Main references (sources)	1. Plant Physiology / Dr. Medhat				
Recommended books and references	- Iraqi Agriculture Journal				
(scientific journals, reports)					
Electronic References, Websites	All agricultural and plant disease magazine sites				

1.	Course	Name:
••	Course	i tunic.

### English

2. Course Code:

#### **3**. Semester / Year: Semester

1\2

4. Description Preparation Date:

27 \ 2 \ 2024

5. Available Attendance Forms:

Present way

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

30 hours  $\setminus$  2 Units

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

Name:

Email:

8. Course Objectives								
Course (	bjective	S	Teachir	Teaching students English language skills				
			<ul> <li>Trying to er</li> </ul>	mploy the Englis	h language to serve			
				school curri	culum			
			•Teachin	g students skills	that help them pass			
				international lan	guage tests			
			•Motivatin	g students to res	earch foreign source			
		9. Teaching	and Learning Stra	tegies				
5	trategy	projectors in classro	mar through availab	ole learning me	ethods such as n methods, quic			
		10. C	ourse Structure					
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation			
		Outcomes	name	method	method			
1	2	Identify types of sentence	Sentences stricture	The presenc	Daily tests			
2	2	Identify parts of speech	Past tense	The presenc	Daily tests			
3	2	Recognizing names	Past simple	The presenc	Daily tests			
4	2	Identify the functions of no	Past continuous	The presenc	Daily tests			
5	2	Identify pronouns	Present tenses	The presenc	Daily tests			
6	2	Identify traits	Present Simple	The presenc	Daily tests			
0		2	1	The presenc	Daily tests			

7	2	Recognize the situation	Present continuous	The presenc	Daily tests			
8	2	Recognizing the passive vo	Future tense	The presenc	Daily tests			
9	2	Learn about the simple pres	Future simple	The presenc	Daily tests			
10	2	present perfect	Paragraphs writing	The presenc	Daily tests			
11	2	Learn about the present	Paragraphs writing	The presenc	Daily tests			
12	2	continuous tense	Paragraphs writing	The presenc	Daily tests			
	11. Course Evaluation							
Attend	lance 5 -	+ Daily exams and assignment	s 2 + Reports 3 + Montl is 50	hly exam $40 = 50$ ,	The final exam			
		12. Learning	and Teaching Reso	urces				
Req	uired te	xtbooks (curricular books, if ar	ıy)					
	Ма	in references (sources)	Cam	bridge English:	Preliminary			
Recomr	mended	books and references (scientif	ic Cam	bridge English:	Preliminary			
	jo	urnals, reports)						
	Electr	onic References, Websites		An English v	rideos			

Cour	rse Description Form							
me: Basics of field crops								
de:								
3. Semester / Year: first semester / second year								
4. Description Preparation Date: 14 / 2/ 2024								
Attendance Forms: prese	ent way							
f Credit Hours (Total) / N Inits	umber of Units (Total)							
dministrator's name (me	ention all, if more than one name)							
8. Co	urse Objectives							
<ul> <li>Strengthening efforts aimed at using and prope managing water resources.</li> <li>Develop a future vision for developing water harvesting technologies to support water resource.</li> <li>Increasing the volume of irrigation water availa for agricultural use, by adding dams, tanks, irrigation canals, and drilling wells, in addition development projects.</li> <li>1- The course examines the identification of the mismportant grain crops in Iraq and the world.</li> <li>2- It includes studying the scientific methods used growing grain crops</li> <li>3 -Study the appropriate environmental conditions growing each important field crop</li> <li>4- Defining the most important ways to increas productivity for each field crop</li> <li>5- Study the problems related to pests and disease each field crop</li> </ul>								
9. Teaching a	and Learning Strategies							
1-	Explanation and clarification							
	2- Lecture method							
A. Dra	3- Student groups actical lessons in agricultural fields							
	c trips to learn about field crops in Iraq							
	me: Basics of field crops de: Year: first Semester / Se A Preparation Date: 14 / 2 Attendance Forms: prese Credit Hours (Total) / N Inits dministrator's name (me 8. Co 8. Co 8. Co efforts aimed at using and prope aging water resources. ture vision for developing water vologies to support water resource olume of irrigation water availa ral use, by adding dams, tanks, s, and drilling wells, in addition ojects in this field and water supp projects. 9. Teaching a 1.							

10. Course Structure							
Week	Hours	Required	Unit or subject name	Learning	Evaluation		
		Learning		method	method		
		Outcomes					
The first week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Field crops: their definition, Its development, its creators	Practical lecture and discussion	Exams , reports, discussions Quizzes		
second week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Environmental factors in Iraq and in The world and its relationship to crop growth Field, location and surface, climate Soil, water resources	Practical lecture and discussion	Exams , reports, discussions		
the third week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	division of field crops, According to the life cycle	Practical lecture and discussion	Exams , reports, discussions		
fourth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Temperature, factors affecting Heat, temperature relationship With crops, crop adaptation To reduce the effect of temperatures And temperature damage	Practical lecture and discussion	Exams , reports, discussions		
The fifth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	For light, the importance of light for plants, Adaptation of plants to light, importance Light in seed germination	Practical lecture and discussion	Exams , reports, discussions		
the sixth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	First monthly exam	Practical lecture and discussion	Exams , reports, discussions		
Seventh week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Water, water in the soil and its extent Crops benefit from it, balance internal water of the plant, Water consumption, efficient Water use, effect of water deficiency On crops, drought damage	Practical lecture and discussion	Exams , reports, discussions		
The eighth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Soil, soil texture, composition Soil, soil components, matter Soil organics, soil water, Soil air, harmful effect Soil salts on crops	Practical lecture and discussion			
Week nine	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Air, air pollution, wind effect Crops, soil erosion by Crop winds	Practical lecture and discussion	Exams , reports, discussions		
The tenth week	2Theoretical 2Practical	memorizing, understanding	Mutual benefit, competition, opposition	Practical lecture and	Exams , reports,		

		, analyzing, and applying		discussion	discussions
Week eleven	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Seeds and their importance, composition and maturity Seed dormancy, diagnosis Seed grading screening, storage Seeds, marketing	Practical lecture and discussion	Exams , reports, discussions
The twelfth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	Weeds and ways to combat them	Practical lecture and discussion	Exams , reports, discussions
The thirteenth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	The updated one Agricultural courses	Practical lecture and discussion	Exams , reports, discussions
The fourteenth week	2Theoretical 2Practical	memorizing, understanding , analyzing, and applying	The updated one Breeding and improving field crops Major crops in the world And Iraq	Practical lecture and discussion	Exams , reports, discussions
The fifteenth week		11.	The second monthly exam		

Attendance 5 + Daily exams and assignments 2 + Reports 3 + Practical exam 15 + Monthly exam 25 = 50 quest , The final exam is 20 practical + 30 theoretical

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Principles of field crops Dr Majeed Mohsen A	
	Ansari Dr. Abdel Hamid Ahmed Al-Younis	
	Dr Ghanem Saadallah Hasawi Dr. Wafqi Sha	
	Al-Shamaa	
Main references (sources)	From methodological books, help books, the	
	Internet, and scientific research	
Recommended books and references	Iraqi Scientific journals in basic specializations	
(scientific journals, reports)		
Electronic References, Websites	Al-Muthanna University e-learning website	
	https://agr.mu.edu.iq/	

				-				
1. Cour	1. Course Name:							
Principle	Principles of animal production							
2. Cour	se Co	de:						
3. Seme	ester /	Yea	r:					
autumn	seme	ester	/ first year					
4. Desc	riptio	n Pre	paration Date:					
26/2/20	)24		-					
5. Avai	lable	Atter	ndance Forms:					
Present	-							
			dit Hours (Total) /	Number	of Units (T	'otal)		
60 hour			-				<b>)</b>	
-	rse a	dmin	istrator's name (	mention	all, if more	e than one na	ime)	
Name: Email:								
Linan.								
			8.	Course (	Objectives			
Course Ob	ojective	S			• • It ai	ms for the student	to recognize the	
						portance of anima	•	
						ciences associated ip of animal produ		
					relationsh	production.		
			9. Teachin	g and Le	earning Stra	-		
Stra	ategy		Audio methoo	ds (teach	ing explana	tion of the topi	c) Style	
					g on the bla			
		]	The method of dire					
					Structure	n class particip	ation	
Week	Hour		Required Learning		or subject	Loorning	Evaluation	
WEEK	noui	5 r	Outcomes		•	Learning method	method	
1	1		memorizing,		ame luction to	Practical lecture	method	
1	4	u	nderstanding, analyzing,		production	and discussion	Onia	
			and applying	and its	economic		Quiz	
2	4		memorizing,	-	ortance	Practical lecture		
	4	u	nderstanding, analyzing,		duction	and discussion	Ouiz	
			and applying		cy of farm		Quiz	
	animals							

		1	1					
3	4	memorizing, understanding, analyzing, and applying	animal Iraq imı	acles facing production in and ways to prove them	Practical lecture and discussion	Quiz		
4	4	memorizing, understanding, analyzing, and applying	cow	y cows, beef /s and dual- pose cows	Practical lecture and discussion	Quiz		
5	4	memorizing, understanding, analyzing, and applying		Exam	Practical lecture and discussion	Exam		
6	4	memorizing, understanding, analyzing, and applying	manag	blishing and ging a flock of p and goats	Practical lecture and discussion	Quiz		
7	4	memorizing, understanding, analyzing, and applying	chara	falo, general acteristics of buffalo	Practical lecture and discussion	Quiz		
8	4	memorizing, understanding, analyzing, and applying	e imp	try birds, the conomic portance of ltry projects	Practical lecture and discussion	Quiz		
9	4	memorizing, understanding, analyzing, and applying	Nutriti	on and fodder	Practical lecture and discussion	Quiz		
10	4	memorizing, understanding, analyzing, and applying		Exam	Practical lecture and discussion	Exam		
11	4	memorizing, understanding, analyzing, and applying		lth care for ultry birds	Practical lecture and discussion	Quiz		
12	4	memorizing, understanding, analyzing, and applying	imp	Genetic rovement in poultry	Practical lecture and discussion	Quiz		
13	4	memorizing, understanding, analyzing, and applying	e	ep and goats conomic nportance	Practical lecture and discussion	Quiz		
14	4	memorizing, understanding, analyzing, and applying	Class meth	ods used for sification	Practical lecture and discussion	Quiz		
15	4	memorizing, understanding, analyzing, and applying	She	ep breeding	Practical lecture and discussion	Quiz		
		11. C	Co2urs	e Evaluation				
Attenda		Daily exams and assignn = 50 quest , The final exa		-		+ Monthly exam		
		12. Learning	and T	eaching Res	ources			
Requ	uired text	books (curricular books,	if any)		Animal Product Zuhair Al-Jalil			
Main references (sources)				2- The bas	le production d. S Hamid Al-Qudsi ics of producing a nd goats, Dr. Jala	and raising		
Red	commen	ded books and references	s		rnals in basic spec			
	Recommended books and references							
(scientific journals, reports)								
---------------------------------	------------------------							
Electronic References, Websites	Animal Science Journal							

- 1. Course Name: Plant nutrition
- 2. Course Code:
- 3. Semester / Year:

Second / Second year

4. Description Preparation Date:

14/2/2024

5. Available Attendance Forms:

Present way

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

60 hours / 3 Units

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

Name:

Email:

8. Course Objectives					
Course Objective	s • Introduction to plant nutrition				
	<ul> <li>Explanation of macro and micro nutrients</li> </ul>				
	<ul> <li>Classifications of nutrients according to their importance and</li> </ul>				
	functions				
	<ul> <li>Methods of calculating nutrient solutions</li> </ul>				
	Detection of nutrients				
	<ul> <li>Differences between passive absorption and active absorption</li> </ul>				
	<ul> <li>A brief idea about heavy metals and their effect on plants</li> </ul>				
	<ul> <li>Study the reasons for the appearance of symptoms of element</li> </ul>				
	deficiency on plants				
	<ul> <li>Study the methods of water mass transfer within the plant body</li> </ul>				
	<ul> <li>Study the ways nutrients reach the plant</li> </ul>				
	<ul> <li>A simplified idea about the effects of stress on plants trees in citi</li> </ul>				
	and central islands				
	9. Teaching and Learning Strategies				
Strategies	Ask students inferential questions Establishing				
	training programs				
	Finding solutions to the problems and obstacles tha				
	students encounter in the practical part				
	Enabling students to find solutions and applications f				

			crisis situ	uations	
		10. Cours	e Structure		
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	name	method	method
the first	4	memorizing, understanding, analyzing, and applying	Introduction to pate nutrition	Attend	a daily test
the secon	4	memorizing, understanding analyzing, and applying	Taking plant samples preparing them for analysis	Attend	a daily te
the third	4	memorizing, understanding analyzing, and applying	Estimating the moist content of plant samp	Attend	a daily te
the fourth	4	memorizing, understanding analyzing, and applying	Digestion of plant sam	Attend	a daily te
Fifth	4	memorizing, understanding analyzing, and applying	Nitrogen in plants symptoms of deficier Estimation of tota nitrogen in plant samp	Attend	a d te
VI	4	memorizing, understanding analyzing, and applying	Phosphorus in plant symptoms of deficien estimation of total phosphorus in plan samples	Attend	a daily te
Seventh	4	memorizing, understanding analyzing, and applying		Attend	a daily te
VIII	4	memorizing, understanding analyzing, and applying	-	Attend	a daily te
Ninth	4	memorizing, understanding analyzing, and applying	Calcium and magnesi in plants - symptoms deficiency - estimatio calcium and magnesi in plant samples	Attend	a daily te
The tenth	4	memorizing, understanding analyzing, and applying	Sulfur in plants - symptoms of deficien estimation of total sul in plant samples	Attend	a daily te
eleventh	4	memorizing, understanding analyzing, and applying	Estimating cations o microelements in pla and studying the symptoms of their deficiency in plants. plants and studying t symptoms of their deficiency in plants	Attend	a d te
twelveth	4	memorizing, understanding analyzing, and applying	Determination of chlo in plants	Attend	a daily to

Thirteent	4	memorizing, understanding analyzing, and applying	Second month exar	Attend	a daily tes
fourteent	4	memorizing, understandin, analyzing, and applying	Food farms	Attend	a daily tes
Fifteenth	4	memorizing, understandin analyzing, and applying	Nutrient solutions	Attend	a daily tes
Attendance 5 +	Daily exai	ns and assignments 2 + Reports	<b>Se Evaluation</b> 3 + Practical exam 15 + ctical + 30 theoretical	- Monthly exam 25	5 = 50 quest , The
		12. Learning and		rces	
Requir	ed textbo	ooks (curricular books, if a		tion Book by Ha May God bless I	amza Kadhim Najm Al-Nuaim
	Main re	eferences (sources)			
Recomme	nded boo	ks and references (scienti	fic		
	journa	als, reports)			
E	ectronic	References, Websites	Information	n and lectures fr	om the Intern

<b>Course Description Form</b>						
1. Cou						
			cations 2			
2. Cou	rse C	oa	e:			
3. Sem	nester	/ \	Year:			
Second	seme	st	er / second year			
4. Des	cripti	on	Preparation Date:			
29\2\2	024					
5. Ava	ilable	e A	ttendance Forms:			
Actual	prese	ene	ce			
			Credit Hours (Total) / Nun	nber of Units (Tota	al)	
30  hour						
	irse a	ad	ministrator's name (men	tion all, if more t	nan one name)	
Name: Email:						
Linuit.			8. Cours	se Objectives		
urse Obje	ecti			dent gets to know Mi	crosoft excel	
			The student should k	-		l life.
		•	The student should apply ma	ny examples that rela	tive to agriculture se	ector as wel
				as other sectors.		
			9. Teaching and	Learning Strateg	ies	
Strate	egy		1-Exp	planation and clari	fication.	
				2- Practical lessor		• 1 11
			3- Self-learning method	<b>•</b> •	application indiv	idually
				se Structure		
wee k	Hou	rs	Required Learning	Unit or subject	Learning	Evaluati
ĸ			Outcomes	name	method	on
		2	momoulaine en Janeton Berg, an J	······		method
First	/	2	memorizing,understanding, analyz and applying	memorizing	Explanation, presentation of t	the exam
					model and lectu	
second	/	2	memorizing, understanding,	Tabs and totals	Explanation,	the exam
			analyzing, and applying		presentation of t model and lectur	
third	/	2	memorizing, understanding, analyz		Explanation,	the exam
			and applying	sheets	presentation of t model and lectur	
fourth	,	2	memorizing,understanding, analyz and applying	Practical Exampl	Practical sessio	the exam
			and apprying			J

		1					
Fifth	2		norizing, understanding, nalyzing, and applying	Practical Examp	Practical sessio	the exam	
Sixth	2	memoriz	ing,understanding, analyz and applying	Workbooks desi	Explanation, presentation of t model and lectur	the exam	
Sevent	2	memoriz	ing,understanding, analyz and applying	Fundamentals o data entry	Explanation, presentation of t model and lectur	the exam	
Eighth	2	memoriz	ing,understanding, analyz and applying	Fundamentals o data entry	Explanation, presentation of t model and lectur	the exam	
Ninth	2	memoriz	ing,understanding, analyz and applying	Fundamentals o data entry	Explanation, presentation of t model and lectur	the exam	
Tenth	2	memoriz	ing,understanding, analyz and applying	Practical Examp	Practical sessio	the exam	
event	2	memoriz	ing,understanding, analyz and applying	Practical Examp	Practical sessio	the exam	
Twelft	2	memoriz	ing,understanding, analyz and applying	Tables	Explanation, presentation of t model and lectur	the exam	
hirteen	2	memorizing,understanding, analyz and applying		Charts	Explanation, presentation of t model and lectur	the exam	
rteen	2	memorizing,understanding, analyz and applying		Practical Examp	Practical sessio	the exam	
fteent	2	memoriz	ing,understanding, analyz and applying	Practical Examp	Practical sessio	the exam	
			11. Course	e Evaluation	•		
			1-Theoretical test	ts 25			
			2- Practical tests	15			
			3- Reports and stu				
			4- Final exam	50			
			12. Learning and T	reaching Resource	ces		
	extbooks						
books, if any)			1- Microsoft Excel 2016 Step by Step 1st Edition by Curt				
Main references (sources		sources	1- Microso	Fry	• •	JII UY CUIT	
			2- Microsof		c ared by Muhamma	ad Malik.	
commen	ded bool	ks and		<b>* *</b>			
reference	es (scien	tific					
journals	s, reports	s)					
Electron	nic Refer	ences,	https://support.mic	-		n-t excel-	
V	Vebsites	6	starter-601794a	19-b73d-4d04-b2d4	4-eed4c40f98be		

		Cours	se Description Form	1	
. Cour	rse Name:	Microbiology			
			2. Course Code:		
			3. Semester / Year:		I
First	semester	/ second year			
. Desc	ription Pr	eparation Date:			
			14 / 2 / 2024		
		5. Ava	ailable Attendance Form	ns:	
			Present way		
	6. N	lumber of Credit I	Hours (Total) / Number	of Units (To	tal) :-
-	7 Course	administrator's	60 hours / 3 Units name (mention all, if	more than (	ne name)
		Name: :-	name (mention all, i		
		Email:			
		8	8. Course Objectives		
Cour	rse 1-	Learn about the typ	es of microorganisms (bacto	eria, fungi, alg	ae, snakeworms,
Object	ive		parasites)		
	• 2-	Knowing the structu	re of bacterial and fungal c	ells, their phys	iology, nutrition
			metabolism, and these bio	ology	
		3Knowled	ge of bacterial families and	their characte	ristics
		•	• 4-Knowing the types of	fungi.	
		• 5- Access to the	most important microbiolog	gy laboratory in	nstructions
	6-Kno	wledge of sterilizatio	n methods for materials and	d equipment us	ed in the labo <mark>r</mark> at
	• 7-K	nowing the types an	d methods of preparing me	dia used in gro	wing microscopi
			organisms		
		•	8-Knowing the method of		
		• 9	-Study of bacterial counting	g methods	
		9. Teach	ning and Learning Strate	egies	
Strat	tegy		d of discussion, lecture a	and interroga	tion
		10	. Course Structure		
Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning		method	method
		Outcomes			

1	1		Defini	tion of biology an	The lectur	the exams
	4	Memorize,		classification of	and	
		understand		sciences	Discussio	
		analyze		serences	215005510	the exams
2	1	anaryze	Bacteria	l shapes and exter	The lectur	
		Memorize,		face components for	and	Editorial
		understand		bacterial cell	Discussio	
		analyze			21500,5510	the exams
3	1	anaryze	Internal	components of	The lectur	the exams
	4	Memorize,	memai	bacterial cell	and	the exams
		nderstand, analyz		Suctorial con	Discussio	ule exams
4	u 1	nuerstanu, anaryz	Bact	erial growth and	The lectur	4 <b>1</b> • • • • • • • • •
4	4	M	Daci	reproduction	and	the exams
		Memorize,		reproduction	Discussio	.1
_	A	understand, analy		Nutrition of	The lectur	the exams
5	4		n	nicroorganisms	and	
		Memorize,		allisilis	Discussio	the exams
_	4	understand,6anal			The lectur	
7	4			Euro ei	and	41
		Memorize,		Fungi	Discussio	the exams
0		understand, analy			The lectur	
8	4				and	the exams
		Memorize,	Pro	otozoa (parasites)	Discussio	
		understand, anal			Discussio	
0	1				The lectur	
9	4			Viruses	and	
		Memorize,		viiuses	Discussio	
10		understand, analy			The lectur	
10	4		M			
		Memorize,	INI	icrobial genetics	and Discussio	
		understand, analy			Discussio	
		11.	Cours	e Evaluation		
Attendan	ce 5 + Daily ex	ams and assignments 2 -	+ Reports ?	3 + Practical exam 15 +	Monthly exam 25	5 = 50 quest The
				tical + 30 theoretical		
				Teaching Resou	rces	
Page	urad taythaa		-		Microbiol	Ogy
кеци		ks (curricular books,	n any)			
	Main re	ferences (sources)			acteriology theo	1
		and votavana (	antifi a	E	Bacteriology pra	actical part
ecomm	ended books	s and references (sci	entific			
				<u> </u>		

			Course	Description Fo	orm	
				ourse Name:		
			Plant c	lassification		
			2. (	Course Code:		
			3. Sei	mester / Year:		
			Second seme	ester / Second ye	ar	
			4. Description	n Preparation Da	te:	
			14	/2/2024		
			5. Available	Attendance Forms	8:	
	6 N	hone	f Cradit Harris	Present way	of Unite (Tet	a1)
	o. mum	ber 0		(Total) / Number ours / 3 Units	or Units (10t	ai)
7. Co	ourse adr	ninis		(mention all, if n	nore than or	ne name)
Name:				· ·		,
Email:						
			0.000			
Cours	o Obiostivo	•		se Objectives	<u> </u>	dented in plant
Cours	e Objective	S		plant taxonomy on		
			taxonomy and the applied fields of taxonomy and relationships between plants			
			• It includes knowledge of the different plant organs through which			
			plant can be classified			
			<ul> <li>Knowing the vegetative and reproductive characteristics and the</li> </ul>			
			importance in plant classification			
				Methods used in p		
			-	e evolutionary import	•	•
		-		f monocotyledonous		onous plants
	•	9		Learning Strated		
Strat	egies			Ask students inferer	•	
		Fin	ding colutions to t	Establishing traini		donte oncountor
		rm	ung solutions to t	he problems and ob: the practica		aents encounter
		E	nabling students t	the pructications and	•	r crisis situation
				se Structure		
Week	Hours	Regu	ired Learning	Unit or subject	Learning	Evaluation
		-	Outcomes	name	method	method
				- 85		

the first	4	Explanations, presentation	Introduction to plant		
		of the model and lucture	classification and its	Attend	a daily test
			importance - the		
			foundations of plant		
			classification and		
			general terminology about classification		
the secon	4	Explanations, presentation of	Applied fields of		
		model and lucture	taxonomy - relationsh between plants	Attend	a daily tes
(1	1	Explanations, presentation of	Classification syster		
the third	4	model and lucture	ancient and moder	Attend	o doily to
		model and fueture	classification patter	Attellu	a daily tes
			scientific nomenclati		
			its laws and taxonon		
			ranks		
the fourt	4	Explanations, presentation of	Primitive and advand		
the fourt	4	model and lucture	traits in plant parts	Attend	a daily tes
			vegetative and	7 tuena	a daily tes
			reproductive traits a		
			their importance ir		
			classification		
Fifth	4	Explanations, presentation of	Installation of flor		
1'IIUI	4	model and lucture	organs on the floral st	Attend	a daily
		model and facture	flower symmetry	Attellu	a uan
			number of flower ri		
			and number of mem		
			in one ring		
VI	4	Explanations, presentation of	Floral systems - flor		
V I	4	model and lucture	equation - Al-Tamish	Attend	a daily to
				Attenu	a daily tes
Seventh	4	Explanations, presentation of	Methods of studyin		
Deventin	-	model and lucture	taxonomic units	Attend	a daily tes
			comparatively		
VIII	4	Explanations, presentation of	The evolutionary		
,		model and lucture	importance of	Attend	a daily tes
			reproductive parts -		5
			flowering vascular pl		
			flowering vascular pla		
Ninth	4	Explanations, presentation of	Evolutionary		
1 (111011		model and lucture	characteristics of	Attend	a daily tes
			flowering plants - tl		5
			origin of flowering pl		
The tentl	4	Explanations, presentation of	Study of plant group		
	-	model and lucture	and confirmation of s	Attend	a daily tes
			plants and the		
			characteristics of fami		
			of gymnosperm plan		
eleventh	4	Explanations, presentation of	Monocot and		
	•	model and lucture	dicotyledonous plan	Attend	a daily
	4	Explanations, presentation of	Description of select		
twelveth	<u> </u>	model and lucture	families of monocot	Attend	a daily tes
twelveth	4		such as the Najiliyya	1 1000110	a anij oo
twelveth	4		Such as the raphry ya		1
twelveth	4		the Saidia		
		Explanations, presentation of	the Saidia		
twelveth Thirteent	4	Explanations , presentation of model and lucture	the Saidia Description of selec	Attend	a daily to
			the Saidia Description of selec dicotyledons such	Attend	a daily tes
			the Saidia Description of selec dicotyledons such leguminous, mallov	Attend	a daily tes
			the Saidia Description of selec dicotyledons such	Attend	a daily tes

		Cucumber, and Solanaceae familie					
Fifteenth 4	Explanations , presentation of model and lucture	Plants of the Iraqi environment	Attend	a daily test			
	11. Course Evaluation						
	y exams and assignments 2 quest , The final exam is 2	-		Monthly exam			
_	12. Learning and	Teaching Resou	rces				
Required textb	ooks (curricular books, if ar	IY) Pl	Plant classification, Dr. Hussein Ali Al- Moussawi				
Main	references (sources)	sp	Recent articles from the Internet and fro specialized scientific journals, the Iraq Agricultural Sciences Journal, and the vir library				
Recommended bo	oks and references (scientif	ic	Iraqi academic scientific journals				
jourr	nals, reports)						
Electroni	c References, Websites		Plant tax	konomy			

I

1.	Course	Name:

Agricultural guidance

- 2. Course Code:
- 3. Semester / Year:

first Semester / second year

4. Description Preparation Date

12 / 2 / 2024

- 5. Available Attendance Forms:
- In a present way
- 6. Number of Credit Hours (Total) / Number of Units (Total)
- 30 hours / 2 units

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

Name:

Email:

## 8. Course Objectives

Course Ob	ojectives	• Teaching and introducing students to the most important link		
		in the agricultural extension system, which is the agricultural		
		extension worker and his role in transferring scientific material		
		from scientific research departments and delivering it to farms		
		with some ease and guidance.		
		• Teaching students the art of adopting positive ideas in the		
		field of agriculture		
		9. Teaching and Learning Strategies		
Strategy		A- Cognitive objectives		
		B - The program's skill objectives		
		1- Graduation research.		
		2- Scientific reports		
		3- Linking information to engineering reality		

10. Course Structure							
Week	Hours	Required Learning	Unit or subject	Learning	Evaluation		
		Outcomes	name	method	method		
1	2	memorizing, understa practica application	A historical overview o agricultural extension	Lecture and discussio n	Oral tests		
2	2	memorizing, understa practical application	Types of extension traini	Lecture and discussio n	Quick exan		

2	2	momorizing			Lecture	Oral taata
3	2	memorizing, understa		nmunication	and	Oral tests
		practical application	pro	Ces	discussio n	
4	2	memorizing,		ocess of adoption a	Lecture	Quick exan
		understa practical	S	pread of modern innovations	and discussio	
		application			n	
5	2	memorizing,	- Rural leadership		Lecture	Oral tests
Ŭ	2	understa		-	and	
		practical application			discussio	
					n	
6	2	memorizing, understa		ing extension	Lecture and	Quick exan
		practical application	progra	a	discussio	
					n	
7	2	memorizing,		ricultural extensi	Lecture	Written
		understa	meth	ods and extensio methods	and	exa
		practical application		methous	discussio n	
8	2	memorizing,	T	ne philosophy of	Lecture	Oral tests
•	_	understa	agri	cultural extensio	and	
		practical application			discussio	
9	2	memorizing,	Donk	straight wings.	n Lecture	
Э	Z	understa		alf - wing rank.	and	Quick exan
		practical	11	ian - wing rank.	discussio	
		application			n	
10	2	memorizing, understa		mportance of usi odern irrigation	Lecture and	Oral tests
		practical		ethods and their	discussio	
		application		conomic effects	n	
11	2	memorizing,		role of agricultu	Lecture	Quick exan
		understa practical		nsion in preservii chaeological areas	and discussio	
		application	arv	inacorogical areas	n	
12	2	memorizing,		Water crisis	Lecture	Oral tests
		understa			and	
		practical application			discussio	
l		4.4	0	а <u>Frielins</u> tian	n	
				e Evaluation		
Attenda	ance $5 + c$	laily exams and assignn	nents 2 50	+ reports 3 $+$ mo	onthly exam $40 =$	50, final exam
		12. Learning	g and <sup>-</sup>	Teaching Reso	ources	
Requ	lired texth	books (curricular books,	if anv)	Principles	of agricultural e	extension -
1.040			n any)		Abdullah Al- Samarrai	
	Main	references (sources)		Planning ext	ension program	ns - Abdull
		. ,			Al-Samarrai 19	992
				Agricultural	l Extension Sc	ience - Adna
				Hus	ssein Al-Gharj	i 1990
Rec	commend	ed books and reference	S	-Ira	qi Agriculture	Journal
	(scientifi	c journals, reports)		-Magazin	es dealing wit	h beekeeping
	,00001101			-Bullet	ins issued by a	gricultural
					companies	-
					1	

### so Description Form

1. Course Name:         Biotechnology         2. Course Code:         3. Semester / Year:         Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objectives         Learn about biotechnology • Study of nucleic acids and their structure • Stugene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids ar transferring genes between different species and races • Identify applicatio         9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
2. Course Code:         3. Semester / Year:         Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Strigene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids art transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the species and races • Identify application life technologies in agricultural, medical, industrial and other various field for theappl
3. Semester / Year:         Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Strugene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids art transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various field for the technologies in agricultural, medical, industrial and other various field for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and other various for the technologies in agricultural, medical, industrial and the termines for the technologies in agricultural, medical, industrial and the termines for the technologies in agricultural, medical, industrial and termines for the technologies in agricultural, medical, industrial and termines
Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Strigene expression and ways to regulate it • Knowledge of life technologies up genetic engineering • Identify methods of rearranging nucleic acids ar transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various fields for the structure of the structu
Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Str         gene expression and ways to regulate it • Knowledge of life technologies u         genetic engineering • Identify methods of rearranging nucleic acids ar         transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies
4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Str         gene expression and ways to regulate it • Knowledge of life technologies u         genetic engineering • Identify methods of rearranging nucleic acids ar         transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies
4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Str         gene expression and ways to regulate it • Knowledge of life technologies u         genetic engineering • Identify methods of rearranging nucleic acids ar         transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies
2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Strategies         Strategies         A- Cognitive objectives
Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Strugene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids ar transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various fields of the structure o
6. Number of Credit Hours (Total) / Number of Units (Total)         60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Structure • Structure of the expression and ways to regulate it • Knowledge of life technologies up genetic engineering • Identify methods of rearranging nucleic acids are transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various fields         9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
60 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Stugene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids art transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various field 9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
7. Course administrator's name (mention all, if more than one name)         Name:         Email:         8. Course Objectives         Course Objective         Learn about biotechnology • Study of nucleic acids and their structure • Stugene expression and ways to regulate it • Knowledge of life technologies ugenetic engineering • Identify methods of rearranging nucleic acids and their structure • Identify application         If transferring genes between different species and races • Identify application         If technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies
Name:         Email:         8. Course Objectives         Course Objective       Learn about biotechnology • Study of nucleic acids and their structure • Strugene expression and ways to regulate it • Knowledge of life technologies ugenetic engineering • Identify methods of rearranging nucleic acids and transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various fields         9. Teaching and Learning Strategies         Strategies
Email:         8. Course Objectives         Course Objective       Learn about biotechnology • Study of nucleic acids and their structure • Stagene expression and ways to regulate it • Knowledge of life technologies ugenetic engineering • Identify methods of rearranging nucleic acids and transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various fields of the structure objectives         9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
8. Course Objectives         Course Objective       Learn about biotechnology • Study of nucleic acids and their structure • Study of nucleic acids and their structure • Study gene expression and ways to regulate it • Knowledge of life technologies upgenetic engineering • Identify methods of rearranging nucleic acids and transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various field 9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
Course ObjectiveLearn about biotechnology • Study of nucleic acids and their structure • Study gene expression and ways to regulate it • Knowledge of life technologies u genetic engineering • Identify methods of rearranging nucleic acids ar transferring genes between different species and races • Identify application life technologies in agricultural, medical, industrial and other various field9. Teaching and Learning StrategiesStrategiesA- Cognitive objectives
gene expression and ways to regulate it • Knowledge of life technologies u         genetic engineering • Identify methods of rearranging nucleic acids an         transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
genetic engineering • Identify methods of rearranging nucleic acids ar         transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies       A- Cognitive objectives
transferring genes between different species and races • Identify application         life technologies in agricultural, medical, industrial and other various field         9. Teaching and Learning Strategies         Strategies         A- Cognitive objectives
life technologies in agricultural, medical, industrial and other various fie           9. Teaching and Learning Strategies           Strategies           A- Cognitive objectives
9. Teaching and Learning Strategies       Strategies       A- Cognitive objectives
Strategies A- Cognitive objectives
1- Learn about life technologies
2- Recognizing the importance of life technologies
3- The reasons that led to the development of biotechnology
4- Identify the methods of genetic expression of different genes and
specialization occurring in cells.
5- The student will learn genetic engineering techniques, gener
modification methods, and the possibility of using them in the fie plant protection from pathogens.
B- Skills goals
1- Students' knowledge of nucleic acid extraction techniques
2- Identify methods of amplifying DNA using PCR technolog
3- Identify methods of ampiriying DIVA using FCR technolog 3- Identify methods of electrophoresis to cut DNA
4- Identify the bioreactors used in biomanufacturing
10. Course Structure
WeekHoursRequiredUnit or subject nameLearningEvaluation
Learning method method
Outcome
S
the first 4 Introduction to the science of Attend a daily tes
life technologies, the stages of
its development, and the
reasons for its development
the second 4 Experiments to prove genetic Attend a daily tes
material, the structure of DNA,
and the difference between
eukaryotes and prokaryotes

the third	4	<b>PNA</b> structu	re, its different	Attend	a daily test
the unit	+		,	Attenu	a dally test
		• 1	he differences en them		
4 6 4					
the fourth	4	-	ation enzymes	A 1	1 .1
			plication and the	Attend	a daily test
			replication		
Fifth	4		ssion, mRNA		
			ts stages and	Attend	a daily test
			g processes		
sixth	4	Month	nly exam	Attend	a daily test
Seventh	4	Genetic expres	ssion, translation,		
		protein syntl	nesis, stages of	Attend	a daily test
		polypeptide	formation and		_
			nt processes		
VIII	4		gene expression,	Attend	a daily test
			es, induced and		,
			xpression, the		
		-	f the operon,		
			ples of it		
Ninth	4		on to genetic	Attend	a daily test
INITUT	-		neering	Attend	a dairy test
The tenth	4		ds vectors	Attend	a daily test
eleventh	4		ods for inserting	Attend	a daily test
cieventin	-		into cells	Attend	a dairy test
twelfth	4		ogy and its types	Attend	a daily test
twonth			uses	1 ittoria	a dairy tost
Thirteenth	4		nly exam	Attend	a daily test
fourteenth	4		ors Biofuels	7 fitterita	a duity test
Fifteenth	4		ensive exam		
Theenth	4	11. Course E			
	.1			4 4 1 4	1 1 1
Distributin		out of 100 according to the			uch as daily
	preparatio	on, daily oral, monthly, or		borts etc	
<b>D</b> 1 1		12. Learning and Tea	cning Resources		
-		curricular books, if any)			
	Main refere	nces (sources)	Plant biotec	hnology, K. ( Udaipur-Ind	G. RAMAWA' lia
Recommend	ed books an	d references (scientific	Iraqi acad	demic books	
	journals, r		1		5
Ele		erences, Websites	All website	s related to li	fe technologies
				Wikipedia, N	0

### rea Description Form

		Co	ourse Description Form		
1. Cour	se Name:				
Insect ph	ysiology				
2. Cour	se Code:				
3. Seme	ester / Yea	ır:			
First sem	nester /Thi	rd			
4. Desci	ription Pro	eparation Date:			
27 \2\ 20	24				
5. Avail	lable Atte	ndance Forms			
In person					
			Number of Units (Total)		
		etical + 30 practica			
	se admini	strator's name (me	ntion all, if more than one nan	ne)	
Name:					
Email:					
	01.	(•	8. Course Objectives :		14
Cour	se Object		troduce the importance of in		
			cal applications, and the fund Teaching and Learning Strates		body organs.
	Stratogy	9.	1-Sudden daily and conti		ete
	Strategy		2-Exercises and activitie		
			3- Directing students t		
			10. Course Structure		
Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning		method	method
		Outcomes			
		Memorize,	The body wall in insects:	Lecture an	Written tes
		understand.	its importance in the life	discussion	
1	4	analysis	of insects and its		
			components, moulting in		
			insects.		
2	4	Memorize,	Digestive system: - The	Lecture and	Written tests
		understand.	physiological functions of	discussion	
		analysis	the parts of the digestive		
			canal, absorptive		
			digestion, the role of		
			living organisms in		
3	4	Momorizo	digesting food materials.	Lecture and	Written tests
5	4	Memorize, understand.	Excretory system in	discussion	written tests
			insects: the typical	uiscussion	
		analysis	excretory system Methods of removing		
			toxic and excess		

4

4

Memorize,

understand.

analysis

toxic and excess substances, the role of the device in water balance. Respiratory system: How

to breathe in terrestrial

and aquatic parasitic

insects

Lecture and

discussion

Written tests

5	4	Memorize,	Circulat	ory system:	Lecture and	Written tests
5	4	understand.		of the system,	discussion	withen tests
		analysis		its chemical	discussion	
		unuryons		ponents		
6	4	Memorize		of blood cells	Lecture and	Written tests
Ũ	•	,understand.		od plasma	discussion	vv meen costs
		analysis		F		
7	4	Memorize,	The nervous system in		Lecture and	Written tests
		understand.		scription of the	discussion	
		analysis		vstem		
8	4	Memorize,		f transmitting	Lecture and	Written tests
		understand.		als and sense	discussion	
		analysis	-	gans		
9	4	Memorize,	The reprod	luctive system	Lecture and	Written tests
		understand.		sects and	discussion	
		analysis	reproduc	ctive organs		
10	4	Memorize,	How eggs	and sperm are	Lecture and	Written tests
		understand.	formed in t	he female and	discussion	
		analysis	male	systems		
11	4	Memorize,	Hormone	s: their types	Lecture and	Written tests
		understand.			discussion	
		analysis				
12	4	Memorize,	The role of	f hormones in	Lecture and	Written tests
		understand.	gr	owth,	discussion	
		analysis				
13	4	Memorize,		opment,	Lecture and	Written tests
		understand.	-	on and insect	discussion	
		analysis		regulators		
14	4	Memorize, under		es: their types,	Lecture and	Written tests
		stand. analysis		the life of the	discussion	
				isect.		
		2.1.0.0	11. Course			
Distr		e score out of 100 a				such as daily
	I	preparation, daily or				
	• 1.			eaching Resourc		
Req	uired tex	tbooks (curricular b	ooks, if any)	Insect physiol	ogy\Dr. Thabet Al-Darkzali	Abdel Moneim
	Ma	in references (source	es)	Lectures of i	nsect physiolog 2010)	y by (Raad Fadh
Recom	mended b	books and reference	s (scientific		_010)	
100011		urnals, reports)				
	ě	onic References, We	bsites	Al	l entomology e-	ournals
	Lieul		03103	AL	i entomology e-j	oumais

	Course Description Form
1. Course Name:	
Parasitic Nematodes	
2. Course Code:	
3. Semester / Year: 2024	
Second semester / third year	r
4. Description Preparation	
2024/02/14	
5. Available Attendance F	orms:
Presence	
6. Number of Credit Hours	s (Total) / Number of Units (Total)
60 hours (30 theoretical + 3	0 practical) / 3 units
	name (mention all, if more than one name)
Name:	
Email:	
	8. Course Objectives
Course Objectives	• Identify nematode diseases that affect plants and their life cyc
	• Knowing how to isolate and diagnose nematodes in the laborat
	• Knowing the appropriate methods to combat caecilians, wheth
	using agricultural or natural methods, using biological or chemica
	methods, or using resistant varieties.
	• Identify the role of nematodes as vectors of viral and bacteria
	diseases and how to prevent and reduce infection in the field
	• It highlights the skill of field dealing with forms in explaining

8. Course Objectives							
С	ourse Objecti	ves •	Identify nematode diseases that affect plants and their life cyc				
		• H	• Knowing how to isolate and diagnose nematodes in the laborat				
		•	• Knowing the appropriate methods to combat caecilians, wheth				
		usin	g agricultural or natural r				
				ing resistant varieties			
	todes as vectors of v						
diseases and how to prevent and reduce infection in the field							
			t highlights the skill of fie				
		-	blems of nematode diseas		ontrolling them		
			Teaching and Learning Str				
	Strategy		ng theoretical lectures and				
			its to the fields, using illu	0			
			c subject, as well as search				
		pose	d by the teacher and hold	-	le on the topics		
			presented. 10. Course Structure				
		Required					
Week	Hours	Learning	Unit or subject name	Learning	Evaluation		
week	iiouis	Outcomes	Chit of Subject hume	method	method		
	2			Using	Exams,		
1	theoretical	Definition of	Nematodes	PowerPoint, field	reports,		
1	and 2	(nematodes)	Inematodes	visits, and student	discussions,		
	practical	(lielilatodes)		discussions	quizzes		
	2						
	_		The economic	Using	Exams,		
2	theoretical		importance of	PowerPoint, field	reports,		
2	theoretical and 2	nematodes	importance of caecilians as	PowerPoint, field visits, and student	reports, discussions,		
2	theoretical and 2 practical	nematodes	importance of caecilians as important pests	PowerPoint, field	reports, discussions, quizzes		
2	theoretical and 2 practical 2	nematodes	importance of caecilians as important pests Its general features -	PowerPoint, field visits, and student discussions	reports, discussions, quizzes Exams,		
	theoretical and 2 practical 2 theoretical		importance of caecilians as important pests Its general features - the nature of its	PowerPoint, field visits, and student	reports, discussions, quizzes Exams, reports,		
2	theoretical and 2 practical 2 theoretical and 2	nematodes	importance of caecilians as important pests Its general features - the nature of its presence and spread,	PowerPoint, field visits, and student discussions Using	reports, discussions, quizzes Exams, reports, discussions,		
	theoretical and 2 practical 2 theoretical		importance of caecilians as important pests Its general features - the nature of its presence and spread, with a focus on plant	PowerPoint, field visits, and student discussions Using PowerPoint, field	reports, discussions, quizzes Exams, reports,		
	theoretical and 2 practical 2 theoretical and 2		importance of caecilians as important pests Its general features - the nature of its presence and spread,	PowerPoint, field visits, and student discussions Using PowerPoint, field visits, and student	reports, discussions, quizzes Exams, reports, discussions,		

	theoretical and 2 practical	nematodes	morphological characteristics in terms of size and shape	PowerPoint, field visits, and student discussions	reports, discussions, quizzes
5	2 theoretical and 2 practical	nematodes	External - body wall, digestive tract (oral cavity - esophagus - intestine )	Using PowerPoint, field visits, and student discussions	Exams, reports, discussions, quizzes
6	2 theoretical and 2 practical	nematodes	The excretory system - the reproductive system - the nervous system and the sense organs	Using PowerPoint, field visits, and student discussions	Exams, reports, discussions, quizzes
7	2 theoretical and 2 practical	nematodes	Classification of plant nematodes, with a study and description of the common and important genera of the Iraqi nemat ode	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
8	2 theoretical and 2 practical	nematodes	Environmental factors and their relationship to nematode activity and reproduction	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
9	2 theoretical and 2 practical	nematodes	Soil and its various qualities - moisture - temperature - nutrition	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
10	2 theoretical and 2 practical	nematodes	Plant hosts, disease symptoms caused by nematode infection and the resulting damage	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
11	2 theoretical and 2 practical	nematodes	Study of the widespread and important diseases caused by nematodes in terms of their spread factors and symptoms	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
12	2 theoretical and 2 practical	nematodes	The nature of the nematode damage that causes the disease - its reproduction and life cycle	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes
13	2 theoretical and 2 practical	nematodes	Methods of prevention, reducing infection, and resistance to parasites, especially those diseases caused by some common species.	Using PowerPoint, field visits, and student discussion s	Exams, reports, discussions, quizzes

14	and 2 practical	nematodes	caecilians and the relationship between		Exams, reports, discussions,
		nematodes	them, methods of resistance to caecilians (nematod pests)	visits, and student discussions e	quizzes
	2 theoretical and 2		Resistance through agricultural and biological methods		Exams,
15	practical	nematodes	resistance through natural methods - resistant varieties an strains - chemical	d PowerPoint, field visits, and student discussions	reports, discussions, quizzes
			resistance using pesticides		
			11. Course Evaluation	n	
				marks, a written exam	
distr	ibuted betwee	en the daily and		s, and a practical exam	
				distributed as in the the	oretical exam.
divide	d into 15 mar	12. Le	earning and Teaching F	Resources	
divide	d into 15 mar	12. Le s (curricular bo	earning and Teaching F		
divide	d into 15 mar ired textbook ہ	12. Le rs (curricular boo ny)	earning and Teaching Foks,	Resources Books availab	le
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1.	Course	N	lame	2

Bees breeding

2. Course Code:

3. Semester / Year:

Second Semester / 2024

4. Description Preparation Date

2024/02/14

5. Available Attendance Forms:

Presence

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

60 hours (30 theoretical + 30 practical) / 3 units

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

Name:

Email:

		Learning Outcomes		method	method
Week	Hours	Required	Unit or subject name	Learning	Evaluation
			10. Course Structure		
			education.		
			B-4 - Using modern technolo B - 5 - To master the use of modern		
			modern beekee		
			B-3 - access to the information net		wledge of
			honeybees	-	
			B-2 - take the decision quickly to	control pests	that affect
			3-1 - Students' knowledge of honey b programs	bee breeding a	ind screening
			B- the skills objectives o	1 0	
			affect honey bees and meth		
		A	5 to be able to find solutions in the c		
			A-4 that the student mastered	1 01 0	
			A-2: Identify the philosophy and p Collect information on beel	-	
			A-1: Identify the members of the	•	•
Strategy A-Cognitive of			A-Cognitive obj		
		9.	Teaching and Learning Strategies		
			• •Benefits of bee rat	nge products	
			• •Identify ways to	•	
			• Identify the		
			populatio		
			<ul> <li>Knowledge of pest control me</li> </ul>	-	
			<ul><li>Study the philosophy</li><li>The importance of the study</li></ul>	·	-
Course Objectives			• Study of modern methods in beekeeping		
~			~		

1	4	Save,	Historical basis of	Lecture and	Oral tests
		understand, practical	beekeeping, economic importance of beekeeping,	discussion	
		application	bee species, hierarchy of bees		
2	4	Save,	Honey bee strains, genetic	Lecture and	Quick
		understand,	characteristics adopted for the	discussion	exam
		practical	diagnosis of bee strains, good		
		application	qualities of honey - producing		
		11	strains		
3	4	Save,	External anatomy of the body	Lecture and	Oral tests
		understand,	of the bees (head and	discussion	
		practical	appendages, chest and		
		application	appendages, abdomen and		
			appendages		
4	4	Save,	The digestive system and its	Lecture and	Quick
		understand,	accessories, the mechanics of	discussion	exam
		practical	digestion, the method of		
		application	converting nectar to honey,		
			the output device (sections,		
			work and its role in the		
			disposal of toxic substances		
			and waste), bee glands		
5	4	Save,	Circulatory system, sections,	Lecture and	Oral tests
		understand,	functions, respiratory system,	discussion	
		practical	sections, respiratory stomata		
		application	and distribution, nervous		
			system		
6	4	Save,		Lecture and	Quick
		understand,	Exam month only	discussion	exam
		practical			
		application			
7	4	Save,	Female reproductive system,	Lecture and	Written
		understand,	divisions, factors affecting	discussion	exam
		practical	the rate of egg count laid by		
		application	the queen, male reproductive		
		~	system, divisions		
8	4	Save,		Lecture and	Oral tests
		understand,	Life of members of the bee	discussion	
		practical	(queen, worker, male)		
		application			
9	4	Save,	The various phenomena in	Lecture and	Quick
		understand,	the life of members of the	discussion	exam
		practical	sect (expulsion, false		
		application	mothers, theft) causes, signs		
			of emergence, methods of		
10		0	control	Т / 1	0.14
10	4	Save,	The basic rules for the	Lecture and	Oral tests
		understand,	establishment of apiary, the	discussion	
		practical	foundations of beekeeping,		
		application	the catalysts for the success		
	1		of standard beekeeping	1	

11	4	Save,	The importance of bees in the	Lecture and	Quick	
		understand,	mixed pollination of plants,	discussion	exam	
		practical	the number of beehives			
		application	needed for pollination per			
			unit area planted.			
12	4	Save,	Monthly Exam	Lecture and	Oral tests	
		understand,		discussion		
		practical				
		application				
13	4	Save,	Diseases of bees	Lecture and	Quick	
		understand,		discussion	exam	
		practical				
		application				
14	4	Save,	Effect of chemical pesticides	Lecture and	Oral tests	
		understand,	on honey bees, and methods	discussion		
		practical	of protecting bees from			
		application	pesticide risk			
15	4	Save,	Birds harmful to grain in the	Lecture and	Quick	
		understand,	stores and the most important	discussion	exam	
		practical	types, the importance of			
		application	agricultural and the most			
			important damage and types			
			of control methods used			
			against them.			
			11. Course Evaluation			
		I	Daily exam ; 10 grades			
			Daily activity ; 10 grades			
		ł	Homework; 10 grades			
			Reports ; 10 grades			
			onthly exam ; 60 grades			
			arning and Teaching Resources			
Requi	red textbo	ooks (curricular bool	-	Bee Breeding and Silkworm / D. Louay		
		any)		Karim Al-Naji		
	Main ref	ferences (sources)		1-Bee Breeding with modern ways /		
				Said Al- Tazyi		
				2-Honey Bee Breeding / D. Hassan		
				alib Al-loati		
Recom	nmended l	books and references	1 0	iculture Journa		
(sc	ientific jo	ournals, reports)	-Magazines dea	-Magazines dealing with beekeeping		
			-Bulletins iss	ued by agricult	ural	
			со	companies		
El	ectronic I	References, Websites	s All agricultu	ral magazine si	ites	

	Course	e Description Form			
1. Course Name:					
Design and analysis of exp	periments				
2. Course Code:					
3. Semester / Year:					
First semester / third year					
4. Description Preparatio	n Date:				
2024/02/14					
5. Available Attendance	Forms:				
Presence					
6. Number of Credit Hou					
60 hours (30 theoretical +					
7. Course administrator's	name (mention	all, if more than one nar	ne)		
Name:					
Email:		0 01: .:			
		Course Objectives	.1 . 1	1 1	
Course Objectives	0	the student that there are	1	6	
	experimen	ts, and these experiment foundation	U	led on scientific	
	* Analyzing a	xperiments according to		de and logical et	
	* Obtaining accurate results of the experiment leads to making the appropriate decision				
	* Teaching the student many types of designs, as each experiment has				
	specific design				
	* Teaching the student how to test the significance of each mathematic				
	C	mod			
	* Teaching the	student that there are te	sts conducted be	fore the experim	
		and tests proposed after the experiment			
	* Teaching	* Teaching the student that there are values that can be lost during th			
		experiment and that th		ited	
	9. Teach	ning and Learning Strate			
Strategy		A- Cognitive	5		
	* Enables the student to understand the nature of experiments * Enabling the student to distinguish between each design and anothe				
	0	6		0	
	* Enabling the student to focus on the importance and types of factori			rypes of factori	
	experiments * Enabling the student to know integration and its types				
	<ul><li>* Enabling the student to know integration and its types</li><li>* Teach the student when to use the splinter plot design</li></ul>				
	<ul> <li>Teach the student when to use the splinter plot design</li> <li>B- The program's skill objectives</li> </ul>				
	* Skills for dealing with various types of experiences				
		distinguish between type			
	natical model				
* Skills in using many types of experiments in practical applications					
10. Course Structure					
-	ired Learning	Unit or subject name	Learning	Evaluation	
(	Dutcomes		method	method	
1 Me	emorization,	A historical overview of	I poturo and	7	
	derstanding,	statistics, definition of statistics, division of	Lecture and discussion	Oral exams	
practi	cal application	statistics	u15CU551011		
2 4 Mer	norization,	Measures of central	Lecture and	Quick exam	

		understanding	tender	ncy, measures of	discussion	
		understanding, practical application		entralization	discussion	
3	4	Memorization,		es of dispersion		
3	4	understanding,	Wiedsui	es of dispersion	Lecture and	Oral exams
		practical application			discussion	Orar exams
4	4	Memorization,	Hypo	thesis testing,		
	т	understanding,		istical errors,	Lecture and	Quick exam
		practical application	hyp	oothesis t-test	discussion	Quick exam
5	4	Memorization,	Ch	ii-square test		
		understanding,			Lecture and	Oral exams
		practical application			discussion	
6	4	Memorization,	Genera	al concepts and		
		understanding,		ions in designing	Lecture and	Quick exam
		practical application		nd analyzing	discussion	Quiek extain
7	4	Memorization,		xperiments, of agricultural		
/	4	understanding,	• •	ments, complete	Written exam	Written exam
		practical application		omized design		
8	4	Memorization,	Me	eans testing		
0	I	understanding,			Lecture and	Oral exams
		practical application			discussion	Crui Chuilib
9	4	Memorization,	Rando	mized complete	• · ·	
		understanding,		lock design	Lecture and	Quick exam
		practical application			discussion	
10	4	Memorization,	Latin	square design	<b>T</b> / <b>1</b>	
		understanding,			Lecture and	Oral exams
		practical application			discussion	
11	4	Memorization,		al experiments,	L a aturna an d	
		understanding,		ial experiments	Lecture and discussion	Quick exam
		practical application	Wit	h two factors	uiscussion	
12	4	Memorization,		experiments with	Lecture and	
		understanding,	ti	nree factors	discussion	Oral exams
		practical application			01500551011	
13	4	Memorization,	Split plot	design, with two	Lecture and	
		understanding,		factors	discussion	Quick exam
		practical application				
14	4	Memorization,	lit-plot	design, with three	Lecture and	
		understanding,		factors	discussion	Oral exams
		practical application				
15	4	Memorization,		tion and simple ear regression	<b>XX</b> 7 •	<b>XX7</b> • //
		understanding,	Inte	ai iegiessioli	Written exam	Written exam
		practical application				
				Evaluation	1 \	
		- Theoretical tests: (dail				
		- Practical tests: (daily		•		
		- Models for exam		practical reports		
				Teaching Resour		
Requi	ired text	books (curricular books	0	0		eriments / Al-Ra
Keyu		JOOKS (CUITICUIAL DOOKS	, 11 ally)		and Khalfulla, 2	
	Mair	n references (sources)			una mananana, 2	2000
Recomm		boks and references (sources)	entific	-Rooks spe	cialized in desig	ning agricultural
				200kb spc	- and a m debig.	

journals, reports)	experiments
Electronic References, Websites	Articles published by academic and
	professional journals

				Cours	e Description Form		
1.	Cours	e Name:					
	Myce	ology II					
2.	Cours	e Code:					
3	Seme	ster / Yea	<b>r</b> •				
5.				third year			
1		iption Pro					
т.		/02/14	eparatio	m Date.			
5.		able Atte	ndance	Forms			
5.	Prese		indunce	i onnis.			
6.			dit Hor	urs (Total) / Nur	mber of Units (Total)		
0.				cal + 30 practical			
7.					all, if more than one nam	ne)	
	Nam					/	
	Emai						
				8	3. Course Objectives		
	Со	ırse Obje	ctives	Teaching st	tudents about the types of	ascomycetes ba	sidiomycetes, a
		5		C	imperfect fungi that infe		
				• Determine the	he economic importance of		
					these fu	ngi.	
				<ul> <li>Identify var</li> </ul>	ious environmental factor	s and their impa	ict on the spread
					fungi		
				• Identify the classes, orders, families, and individuals of these groups			
				fungi that infect plants in particular.			
					athological symptoms cau		_
				• Finding the	e best ways to combat disc	0	
				<u>о</u> т	biological, integrated		18)
		<u></u>		9. Teac	hing and Learning Strateg		
		Strateg	У	* The studen	A- Cognitive		to and their name
					t gets to know the disease o find out how pathogens	-	
				•	er or how the pathogen spi		
					nt must master how to pre	0	
					diseas		
				* To be ab	ble to find solutions in cas		eading epidemic
					diseases and ways		8 F
				* Identify	quick methods for diagno		ections of plants.
				* The student	t must master how to diss	eminate the info	rmation obtained
				controlling the disease.			
B - The skills objectiv							
	* The student must master how to diagnose these diseases.						
				* The stude	ent will be able to treat fur	-	hat affect variou
	plants.						
	<ul> <li>* To be proficient in using pest control machines.</li> <li>* To be proficient in using modern and advanced methods of pest control</li> </ul>						
						advanced meth	ous of pest contr
T	Vasl	Harris	Dem	10.		Logradius	Explanation
V	Veek	Hours		ired Learning Dutcomes	Unit or subject name	Learning method	Evaluation method
	1			morization,	Ascomucata fungi	Lecture and	memou
	1	4		lerstanding,	Ascomycete fungi	discussion	Oral exams
			unc	ici stanuning,		01500551011	

		practical application			
2	4	Memorization,	Spherical ascomycete		
2	4	,		Lecture and	Quick arom
		understanding,	fungi	discussion	Quick exam
		practical application			
3	4	Memorization,	Ascomycete fungi with	Lecture and	
		understanding,	bottle-fruited fruits	discussion	Oral exams
		practical application			
4		Memorization,	Cup fungi	Lecture and	
	4	understanding,		discussion	Quick exam
		practical application		uiseussion	
5	4	Memorization,	Basidiomycetes	Lecture and	
		understanding,		discussion	Oral exams
		practical application		discussion	
6	4	Memorization,	Basidiom and types of	T / 1	
		understanding,	fruiting bodies	Lecture and	Quick exam
		practical application	6	discussion	
7	4	Memorization,	Classifications of		
,	•	understanding,	basidiomycetes	Written exam	Written exam
		practical application			
8	4	Memorization,	Order of Rusts		
0	т	understanding,	order of Rusts	Lecture and	Oral exams
		practical application		discussion	Oral CAailis
9	4	Memorization,	Order of amout funci		
9	4	,	Order of smut fungi	Lecture and	Ouisle avon
		understanding,		discussion	Quick exam
1	4	practical application	C1		
10	4	Memorization,	Class	Lecture and	
		understanding,	hymenobasidiomycete	discussion	Oral exams
		practical application	S S		
11	4	Memorization,	Order Agaricales	Lecture and	
		understanding,		discussion	Quick exam
		practical application			
12	4	Memorization,	Division of Imperfect	Lecture and	
		understanding,	Fungi	discussion	Oral exams
		practical application		uiseussion	
13	4	Memorization,	Ranking of imperfect	Lecture and	
		understanding,	fungi	discussion	Quick exam
		practical application		discussion	
14	4	Memorization,	Imperfect fungal	Laster 1	
		understanding,	families	Lecture and	Oral exams
		practical application		discussion	
15	4	Memorization,	The most important		
	•	understanding,	types of imperfect	Written exam	Written exam
		practical application	fungi		
			1. Course Evaluation		
			ly exams - monthly exam	s - oral exame)	
			y exams - monthly exams		
			tical and practical reports		
			mination and practical exponsion		
			ing and Teaching Resour		
Required	textbo	oks (curricular books, if		of fungi and their	r plant disease
unu	CALOU(		Mahdi Alshuki		Plant discuse/
			2. fungi / AlSu	nam etai 1990	

Main references (sources)	Basic of fungi/Abdulaziz Nukhailan
Recommended books and references (scientific journals, reports)	- All Biological, Mycology Journals
Electronic References, Websites	- All e-journals (Mycology, Agricultural, Biological)

1. Course Name:         Plant diseases (Plant pathology)         2. Course Code:         3. Semester / Year:         Second semester / third year         4. Description Preparation Date:         2024/02/14         5. Available Attendance Forms:         Presence         6. Number of Credit Hours (Total) / Number of Units (Total)         6 hours (30 theoretical + 30 practical) / 3 units         7. Course administrator's name (mention all, if more than one name)         Name:         Eimail:         8. Course Objectives         Course Objectives         Course objectives         Course objectives         * Introducing the student to the various types of diseases that affect plating abacterial, viral, nematode, and physiological).         • Determine the economic importance of these diseases         • Finding the best ways to combat diseases through methods (natt applied, mechanical, agricultural, biological, legislative, chemical, gent infectious plant diseases         9. Teaching and Learning Strategies         Strategy         A. Cognitive objectives         * The student gets to know the diseases that affect plants and their nam * To try to find out how pathogens are transmitted from one field to another or how the pathogen spreads through the same field.         • The student must master how to giseseminate the information obtained diseases				Course	e Description Form			
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3	4	Memorization, understanding, practical application	Living standards of living organisms	Lecture and discussion	Oral exams	
4	4	Memorization, understanding, practical application	Stages of disease development	Lecture and discussion	Quick exam	
5	4	Memorization, understanding, practical application	development Diagnosing the pathogen and the host's response to the infection	Lecture and discussion	Oral exams	
6	4	Memorization, understanding, practical application	Division of pathogens	Lecture and discussion	Quick exam	
7	4	Memorization, understanding, practical application	Written exam	Written exam	Written exam	
8	4	Memorization, understanding, practical application	The effect of pathogens on their hosts and Means of spread of pathogens	Lecture and discussion	Oral exams	
9	4	Memorization, understanding, practical application	Resistance and defenses of the plant host against pathogens	Lecture and discussion	Quick exam	
10	4	Memorization, understanding, practical application	Methods of controlling plant diseases	Lecture and discussion	Oral exams	
11	4	Memorization, understanding, practical application	Fungi and the diseases they cause	Lecture and discussion	Quick exam	
12	4	Memorization, understanding, practical application	Bacteria and the diseases they cause	Lecture and discussion	Oral exams	
13	4	Memorization, understanding, practical application	Plant viruses and the diseases they cause	Lecture and discussion	Quick exam	
14	4	Memorization, understanding, practical application	Other pathogens and the diseases they cause	Lecture and discussion	Oral exams	
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	Majeed al-Shukri 2. Diseases of field crops / Dr. Maysar Zarzis
Main references (sources)	<ul> <li>Iraqi Agriculture Journal</li> <li>Journals dealing with diseases of all field crops</li> <li>Bulletins issued by agricultural companies and pesticide companies</li> </ul>
Recommended books and references (scientific journals, reports)	- All agricultural sites and crop disease journals
Electronic References, Websites	- World Wide Web

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8	4	Memorization, understanding, practical application	Methods of bush reproduction		Lecture and discussion	Oral exams
9	4	Memorization, understanding, practical application	Means of spreading bushes		Lecture and discussion	Quick exam
10	4	Memorization, understanding, practical application	Preventive means to reduce the spread		Lecture and discussion	Oral exams
11	4	Memorization, understanding, practical application	Mechanical control methods		Lecture and discussion	Quick exam
12	4	Memorization, understanding, practical application	Biological control methods		Lecture and discussion	Oral exams
13	4	Memorization, understanding, practical application	Agricultural practices		Lecture and discussion	Quick exam
14	4	Memorization, understanding, practical application	Chemical method		Lecture and discussion	Oral exams
15	4	Memorization, understanding, practical application	Integrated and sustainable pest control		Written exam	Written exam
	se Evaluation					
2- Practica 3- Report	ical (monthl al (monthly): and attendan	10%				
4- Daily te 5- Final: 5						
		ching Resources				
		urricular books, if any)	College books			
A	rences (sourc		Published research			
		and references (scientifi	Scientific journals & reports			
	References,	Websites	Professional, government & institutional publications			
Co	ourse Description Form					
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Tear						
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	n of the subject) Blackboard		Stra	togy		
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	eacher and the student with th	e evaluation of		icegy		
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t dialogue between the t	eacher and the student with th	e evaluation of				
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t dialogue between the t com participations ure		Required	Hours	The		
t dialogue between the t com participations ure	Unit or subject name Carbohydrates - definition	Required Learning Outcomes Theoretical	Hours 4	The		
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Rapid exam	Lecture	Proteins - their structure construction - their divisions	- Theoretical lecture	4	7	
Rapid exam	Lecture	Fatty acids – their divisions – their interactions	Theoretical lecture	4	8	
Rapid exam	Lecture	Simple sinters – their composition – their sections	Theoretical lecture	4	9	
Second month exam	Theoretical exam	examination	examination	4	10	
Rapid exam	Lecture	Compound and derived lipids - their compositio - their divisions	Theoretical lecture	4	11	
Rapid exam	Lecture	Nucleic acids, their importance	Theoretical lecture	4	12	
Rapid exam	Lecture	Installation, Sections	Theoretical lecture	4	13	
Rapid exam	Lecture	Enzymes, their qualities	Theoretical lecture	4	14	
Rapid exam	Lecture	Factors affecting it	Theoretical lecture	4	15	
11. Course Eva	luation		<b>I</b>		1	
preparation, daily,	score out of 100 accord oral, monthly, written ex d Teaching Resources	ding to the tasks assigned kams, reports etc	I to the student su	ch as da	nily	
Foundations of B Aldaoudi	•	R	equired textbooks (r	nethodol	ogy, if any)	
Integrated Bioche Hohn W. Pelley	emistry	M	Main references (sources)			
List of che	emistry journals		Recommended books and references			
https://www.chem	istry1science.com/2018/0	(scientific journals, reports) Electronic References, Websites				

	Course De	escription Form		
1. Course Name:		1		
Plant genetics				
2. Course Code:				
3. Semester / Year:				
First semester/ Third				
4. Description Prepara	tion Data			
2024/02/14	anon Date.			
5. Available Attendar	ce Forms.			
Presence				
6. Number of Credit H	Jours (Total) / Nun	ober of Units (Total)	)	
60 hours (30 theoretical +			)	
7. Course administrat			e name)	
Name:	or s name (mention	an, it more than on	e hanne)	
Email:				
Lillall.				
8. Course Objectives				
Course Objectives	Training stur	dents to apply th	ne basic laws	of Mendelian
	0	l testing the exten		
		sing genetic hypoth		
	• Identify some genetic concepts such as genetic interaction,			
		over, linkage, and o		,
		ents the concepts of		nheritance and
	maternal influen		<b>v</b> 1	
	Teaching stude	ents the basic princip	oles of clan inher	itance
	•	ents the concepts of		
	quantitative gen	1	e	
Teaching and Learning Str	ategies			
Strategy	A- Cognitive ob	jectives		
	* The student lea	arns about the conce	ept of genetics	
	* The student lea	arns about Mendel's	alaws and mutati	ions in
	Mendelian ratios	5		
	* The student is	able to solve exerci	ses in the field o	f genetics
	U	laws, and ensure tha		n Mendel's
		g the chi-square test		
		ill be trained to appl	y the most impor	rtant genetic
	concepts in the l	•		
		Ill be familiar with t	-	
	-	e field of plant bree	ding and improv	ement
	B - Course-spec			
		udent to solve exerc		
	-	ents to use the variou	-	
	-	netic material and g		
	-	ents to use genetic c	oncepts in plant	breeding and
10 0 0:	improvement.			
10. Course Structure	• 17 •	TT •4	т.	
_	ired Learning	Unit or subject	Learning	Evaluation
	Outcomes	name	method	method

1	4	Genetics, its development, and the relationship of genetics to other sciences	Plant genetics	Lecture and discussion	Oral exams
2	4	Introducing the student to Mendel's first law, Mendel's second law, and an introduction to genetic	Plant genetics	Lecture and discussion	Quick exam
3	4	The student gets to know the types of genetic action	Plant genetics	Lecture and discussion	Oral exams
4	4	Genetic hypothesis and goodness-of-fit test (chi- square) with Mendelian	Plant genetics	Lecture and discussion	Quick exam
5	4	Learn about sex determination systems in living organisms, sex- linked genetics	Plant genetics	Lecture and discussion	Oral exams
6	4	Sex-determined inheritance, sex- influenced inheritance	Plant genetics	Lecture and discussion	Quick exam
7	4	The student learns what genetic crossing over, multiple genetic linkage, and chromosomal mapping	Plant genetics	Written exam	Written exam
8	4	Multiple allele inheritance	Plant genetics	Lecture and discussion	Oral exams
9	4	Nonlinear inheritance and the factors affecting it	Plant genetics	Lecture and discussion	Quick exam
10	4	Learn about the cell cycle and division process	Plant genetics	Lecture and discussion	Oral exams
11	4	The student will learn about the production of DNA, protein, and genetic code	Plant genetics	Lecture and discussion	Quick exam
12	4	Identify the equipment used in genetics laboratories	Plant genetics	Lecture and discussion	Oral exams
13	4	Application of genetic foundations in the field of plant breeding and improvement	Plant genetics	Lecture and discussion	Quick exam
14	4	The student learns the relationship between genes	Plant genetics	Lecture and discussion	Oral exams
15	4	Teaching the student what mutations are, their effects, and their benefits	Plant genetics	Written exam	Written exam
	urse Eva tical test	luation s: (daily exams - monthly exa	ums - oral exams)		

Theoretical and preatical reports				
- Theoretical and practical reports				
- Models for examination and practical experiments				
12. Learning and Teaching Resources				
Required textbooks (curricular books, if any)	Adnan Hassan Muhammad (1982) Basics of			
	Genetics. Dar Al-Kutub for Printing and			
	Publishing. Mosul			
Main references (sources)	Shawqi, Ahmed Shawqi, Fathi Muhammad			
	Abd al-Tawab, and Ali Zain al-Abidin, Id al-			
	Salam. 1993. Principles of genetics translated			
	book. Arab House for Publishing and			
	Distribution. Cairo			
Recommended books and references (scientific	- All agricultural magazine sites and plant			
journals, reports)	genetics magazines			
Electronic References, Websites	- Websites concerned with genetic			
	sciences			

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	Course N	ame:					
English course							
2. Course Code:							
3. Semester / Year: Semester							
Second semester / thirds year							
4. Description Preparation Date:							
2024/02							
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	rs / 2 units					/	
			or's name (men	tion all.	if more than on	e name)	
	Name:			iioii uii,		ie manie)	
	Email:						
8.	Course O	biectives					
	Objective	ě	Teaching stude	ents skil	ls		
course	objective		-			age to serve the	school curriculum
							onal language tests
					o research forei		
9.	Teaching	and Lear	ning Strategies			0	
Strateg	-		<u> </u>	taught	English langua	age skills such	as listening, readi
~ 8.	5						thods such as project
							ls, quick tests, and
			and written exa				,,
10. C	ourse Stru	cture					
Week	Hours	Require	ed Learning	Unit o	or subject	Learning	Evaluation
		Outcom	ies	name	-	method	method
1	2	Mer	norization,	Sente	nces strictures	The presence	Daily tests
2	2	und	erstanding,	I	Past tense	The presence	Daily tests
3	2	practic	al application	Р	ast simple	The presence	Daily tests
4	2	Mer	norization,	Pas	t continuous	The presence	Daily tests
5	2	und	erstanding,	Pre	esent tenses	The presence	Daily tests
6	2	practic	al application	Pre	sent Simple	The presence	Daily tests
7	2	Mer	norization,	Prese	ent continuous	The presence	Daily tests
8	2		erstanding,		uture tense	The presence	Daily tests
9	2	-	al application		ture simple	The presence	Daily tests
10	1 2	N. T			graphs writing	The presence	Daily tests
11. Course Evaluation					graphs writing	The presence	Dury tests
		luation			<u> </u>	-	
Distrib	ourse Eva uting the	luation score ou	t of 100 accord	ding to	the tasks assig	-	dent such as daily
Distrib prepara	ourse Eva uting the ttion, daily	luation score ou y oral, mo	t of 100 accorn nthly, or written	ding to	the tasks assig	-	
Distrib prepara 12. Lo	ourse Eva uting the ation, daily earning ar	luation score ou y oral, mo nd Teachin	t of 100 accord nthly, or written ng Resources	ding to n exams	the tasks assig	-	
Distrib prepara 12. La Require	ourse Eva uting the ation, daily earning ar ed textboo	luation score ou y oral, mo ad Teachin oks (curric	t of 100 accorn nthly, or written	ding to n exams	the tasks assign, reports etc	gned to the stu	dent such as daily
Distrib prepara 12. La Requira Main ra	ourse Eva uting the ation, daily earning ar ed textboo eferences	luation score ou y oral, mo ad Teachin oks (curric (sources)	t of 100 accord nthly, or written ng Resources cular books, if a	ding to n exams ny)	the tasks assign, reports etc Cambr	gned to the stu idge English: Pr	dent such as daily eliminary
Distrib prepara 12. La Requira Main ra Recom	ourse Eva uting the ation, daily earning ar ed textboo eferences mended b	luation score ou y oral, mo nd Teachin bks (curric (sources) books and	t of 100 accord nthly, or written ng Resources	ding to n exams ny)	the tasks assign, reports etc Cambr	gned to the stu	dent such as daily eliminary
Distrib prepara 12. La Require Main re Recom journal	ourse Eva uting the ation, daily earning ar ed textboo eferences mended b s, reports.	luation score ou y oral, mo ad Teachin oks (curric (sources) ooks and )	t of 100 accord nthly, or written ng Resources cular books, if a references (scie	ding to n exams ny)	the tasks assign s, reports etc Cambra Cambra	gned to the stu idge English: Pr idge English: Pr	dent such as daily eliminary
Distrib prepara 12. La Requira Main ra Recom journal	ourse Eva uting the ation, daily earning ar ed textboo eferences mended b	luation score ou y oral, mo ad Teachin oks (curric (sources) ooks and )	t of 100 accord nthly, or written ng Resources cular books, if a references (scie	ding to n exams ny)	the tasks assign s, reports etc Cambra Cambra	gned to the stu idge English: Pr	dent such as daily eliminary

		Course Des	cription Form			
1. Cour	se Name:					
Ecology						
2. Course Code:						
3. Seme	ester / Ye	ar: Semester				
	First / third year					
		reparation Date:				
2024/02/14	<u>r</u>	- <u>-</u>				
5. Avai	lable Atte	endance Forms:				
Presence						
6. Num	ber of Cr	edit Hours (Total) / Numbe	er of Units (Total)			
60 hours (30	theoretic	cal + 30 practical) / 3 units				
7. Cour	se admini	istrator's name (mention all	l, if more than one name)			
Nam	e: Dr. Sal	eh Shehab Sabah				
		abah79@mu.edu.iq				
	se Object					
Course Obje	ctives	e	dent to the most important		tal factors	
		0 0	ganism and the extent of th	1		
			introduce the student to the	1	0.	
		-	ology, its various compone	ents, and the	relationships	
		between living organi			anahina of an	
			omy of nature and monitori ganic and the inorganic	ing the relation	onships of an	
9. Teac	hing and	Learning Strategies	game and the morganic			
Strategy			practical study of the char	acteristics of	nlant	
Strategy		communities	practical study of the char	acteristies of	plant	
			tify different types of environments			
			ns, tropical forests, savann	as, deserts, p	olains,	
		Deciduous forests, co		, , <u>,</u>	,	
		Training students to u	se and read environmental	maps of diff	erent	
		regions.				
		-	th the basics and lectures r			
			esentation methods for the		lelivery	
			ell and clear to the student.			
			to the library by asking th			
		-	about the topics given to the	hem from the	e academic	
10 Corr	se Structu	subject.				
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation	
WCCK	nouis	Outcomes	Unit of subject hante	method	method	
1	4	Memorization,	A practical study on the	The	Daily tests	
		understanding,	characteristics of plant	presence		
		practical	communities	r		
		1	Sampling method and			
			characteristics, natural			
			food chain			
2	4	Memorization,	Learn about methods and	The	Daily tests	
		understanding, practical	devices for measuring	presence		
		application	lighting intensity			

3	4	Memorization,	Analysis of the effect of	The	Daily tests
-		understanding, practical	lighting on the vital	presence	
		application	activities of horticultural	1	
			plants		
4	4	Memorization,	Conduct a study on the	The	Daily tests
		understanding, practical	effect of lighting on the	presence	
		application	level of growth and	1	
			elongation of		
			horticultural plants		
5	4	Memorization,	Learn about methods and	The	Daily tests
		understanding, practical	devices for measuring	presence	
		application	lighting intensity		
6	4	Memorization,	Water as an environment	The	Daily tests
		understanding, practical	factor in plant life. Pictur	presence	
		application	of water in nature and ho		
			plants are affected by it		
7	4	Memorization,	Dividing plants according	The	Daily tests
		understanding, practical	their water needs, the $eff_{\varepsilon}$		
		application	of rain on the spread of		
-			plants		
8	4	Memorization,	Winds, their types, air	The	Daily tests
		understanding, practical	masses and fronts, the eff	presence	
0	4	application	of winds on plants	<b>TT1</b>	Dellesterte
9	4	Memorization,	Atmospheric pressure,	The	Daily tests
		understanding, practical application	factors that affect.	presence	
10	4	Memorization,	atmospheric pressure,	The	Daily tests
		understanding, practical application	distribution of	presence	
11	4	Memorization,	atmospheric pressure and	The	Daily tests
		understanding, practical	circulation,	presence	
		application			
12	4	Memorization,	main ranges of atmosphe	The	Daily tests
		understanding, practical	pressure	presence	
		application			
13	4	Memorization,	The climate of Iraq and i	The	Daily tests
		understanding, practical	impact on the spread of	presence	
		application	desert plants		
14	4	Memorization,	Pollution, its types, plan	The	Daily tests
		understanding, practical	reagents, the role of plants		
		application	preserving the environme		
11.0		<u> </u>	from pollution		
	rse Evalu			1	1 1 1 1
-		e out of 100 according to il, monthly, or written exam	the tasks assigned to the ns, reports etc	student su	ich as daily
	ning and	Teaching Resources			
12 Lea		curricular books, if any)			
	XTDOOKS 1	currentar 000Ks, II ally)		historia	al factors
Required te	,	rces)	Feelogy nhysical tactors	s = mmmm	
	,	·	Ecology, physical factors environment plants and the	-	
Required te	nces (sou	·	Ecology, physical factors environment, plants and the Hosting directors of wea	ir environm	ients

	and how they will forecast for the coming days.
Electronic References, Websites	Simulating a method of protection from environme extremes and ways, book Ecology Conce Applications, written by Manuel C Molles JR, fou edition.

			e Description Form		
	ourse Nat				
Plant Breeding and Improvement					
2. Co	ourse Co	de:			
		Year: fourth			
		third year / plant prote			
4. De	escription	n Preparation Date: 202	23-2024		
2024/02/1					
	ailable A	Attendance Forms:			
In person					
			Number of Units (Total)		
		etical + 30 practical) /			
		ninistrator's name (mer	ntion all, if more than one r	name)	
	ime:				
	nail:	• ,•			
	ourse Ob	,		1 . 1 .	
Course Ob	ojective	e	nts with general information	•	•
			nts to ways to express conc		their types
			nts to strong and weak acid		
			lents what Buffer's solution	ns are and them	r types, with
		examples			
		•	nts to the definition of salts	and their type	es, with theoretic
0 1	1 ·	examples			
	aching a	nd Learning Strategies			
Strategy		Strategic teaching and		`	
			ng explanation of the topic	2 <b>)</b>	
		Style of writing on the			-4
			dialogue between the tea	icher and the	student, with
		student's evaluation in Conduct experiments.	class participation		
10. Cour	se Struc	*			
10. Coui		Required Learning		Learning	Evaluation
Week	Hours	Outcomes	Unit or subject name	method	method
		Memorization,			Exams,
		understanding,	Plant Breeding and	Lecture	reports,
1	4	practical	target of plant breeding	and	discussions
		application		discussion	Quizzes
	4	Memorization,		-	
		understanding,	Pollination and	Lecture	Exams,
2		practical	fertilization	and	reports,
		application		discussion	discussions
<b></b>	4	Memorization,		Lecture	<b></b>
2		understanding,	Denned	and	Exams,
3		practical	Reproduction in plant	discussion	reports,
		application			discussions
	4	Memorization,		Lecture	E.
4		understanding,	Male sterility and self	and	Exams,
4		practical	incompatibility	discussion	reports,
		application	1 2		discussions
5	4	Memorization,	Genetic variation and	Lecture	Exams,
	1	7			,

		understanding, practical application		elationships with lant breeding	and discussion	reports, discussions
6	4	Memorization, understanding, practical application	-	ortant factors to ining gene action	Lecture and discussion	Exams , reports, discussions
7	4	Memorization, understanding, practical application	]	First Exams	Lecture and discussion	Exams , reports, discussions
8	4	Memorization, understanding, practical application		nation some of etic Parameters	Lecture and discussion	Exams , reports, discussions
9	4	Memorization, understanding, practical application	Ge	ene Frequancy	Lecture and discussion	Exams , reports, discussions
10	4	Memorization, understanding, practical application	-	oridization and brid cultivars	Lecture and discussion	Exams , reports, discussions
11	4	Memorization, understanding, practical application	Mut	ation Breeding	Lecture and discussion	Exams , reports, discussions
12	4	Memorization, understanding, practical application	po	Thromosomal Dyploidy and ionships in plant breeding	Lecture and discussion	Exams , reports, discussions
13	4	Memorization, understanding, practical application		eeding of self- lination plants	Lecture and discussion	Exams , reports, discussions
14	4	Memorization, understanding, practical application		eeding of cross lination plants	Lecture and discussion	Exams , reports, discussions
15	4	Memorization, understanding, practical application	S	econd Exams	Lecture and discussion	
11.	n - 41		1	(1 - 4 - 1 - 1	4 - 4 h - 4 - 1	(
		ore out of 100 accor ral, monthly, or writt			to the studen	t such as daily
		Teaching Resources				
		(curricular books, if	any)	Plant Breeding an Dr. Fouad Razzac	-	nt, 2020.
Main refe	erences (so	ources)		From methodolo Internet, and scien	gical books,	help books,
Docommo	ended boo	ks and references (sc	ientific	Iraqi Scientific		in basic

specializations
Al-Muthanna University e-learning website https://agr.mu.edu.ig/

1. Course Name:	Course Description Form						
Integrated pests management							
2. Course Code:							
3. Semester / Year:							
Spring Semester / 2024							
4. Description Preparation Date							
2/4/2023							
5. Available Attendance Forms:							
Courses							
6. Number of Credit Hours (Total) / N	Number of Units (Total)						
30 hours / 2 units	tumber of Omts (Total)	•					
50 hours / 2 units							
7. Course administrator's name (ment	tion all if more than on	e name)					
Name:	tion an, it more than on	e name)					
Email:							
Eman.							
8. Course Objectives							
2	olution of the thought of	fintegrated man	agement of				
pest control	nation of the mought of	integrated man	ugement 01				
1	nilosophy of integrated j	oest managemen	t				
	ce of information in pes		lt.				
	f pest management and		ol alternatives				
	rated pest management	integrated contr	of alternatives				
6-Control Progra							
9. Teaching and Learning Strategies	ams)						
Strategy A-Cognitive objectives	, ,						
	, rated management of pe	est control					
	sophy and principles of		control				
	ering and injury forecast						
control program	ing and injury foreea.	ung Develop	in integrated				
	astered how to prevent t	he occurrence o	f diseases and				
control.	distered now to prevent t		i disedses and				
control.							
10. Course Structure							
	Unit or subject	Learning	Evaluation				
	name	method	method				
······································		Lecture and discussion	Oral tests				
practical application	Control Department,	Lecture and discussion					
practical application	Control Department, brief history of the						
practical application	Control Department, brief history of the stages of its						
practical application	Control Department, brief history of the stages of its development	discussion	Oral tests				
2     2     Save, understand,	Control Department, brief history of the stages of its development The types of pests an	discussion Lecture and					
2     2     Save, understand, practical application	Control Department, brief history of the stages of its development The types of pests an losses they cause	discussion Lecture and discussion	Oral tests Quick exam				
2     2     Save, understand, practical application       3     2     Save, understand, practical application	Control Department, brief history of the stages of its development The types of pests an losses they cause Basic elements of	discussion Lecture and discussion Lecture and	Oral tests				
22Save, understand, practical application32Save, understand, practical application	Control Department, brief history of the stages of its <u>development</u> The types of pests an losses they cause Basic elements of integrated manageme	discussion Lecture and discussion	Oral tests Quick exam				
2     2     Save, understand, practical application       3     2     Save, understand, practical application	Control Department, brief history of the stages of its development The types of pests an losses they cause Basic elements of integrated manageme programs	discussion Lecture and discussion Lecture and discussion	Oral tests Quick exam Oral tests				
2     2     Save, understand, practical application       3     2     Save, understand, practical application       4     2     Save, understand, fractical application	Control Department, brief history of the stages of its development The types of pests an losses they cause Basic elements of integrated manageme programs The role of sampling,	discussion Lecture and discussion Lecture and discussion Lecture and	Oral tests Quick exam				
2       2       Save, understand, practical application         3       2       Save, understand, practical application         4       2       Save, understand, practical application	Control Department, brief history of the stages of its development The types of pests an losses they cause Basic elements of integrated manageme programs	discussion Lecture and discussion Lecture and discussion	Oral tests Quick exam Oral tests				

		-	I			1
			predic	ction programs		
5	2	Save, understand, practical application	-	ole of chemical ides in pest	Lecture and discussion	Oral tests
			-	gement		
6	2	Save, understand,		ole of plant	Lecture and	Quick exam
		practical application		ance in pest gement	discussion	
7	2	Save, understand,		se of parasites a	Lecture and	Written exam
		practical application	insect	predators	discussion	
8	2	Save, understand,		ole of behaviora	Lecture and	Oral tests
		practical application		ance in pest gement	discussion	
9	2	Save, understand,		straight	Lecture and	Quick exam
		practical application	wings	0	discussion	
10		Save, understand,	The re	ole of resistance	Lecture and	Oral tests
		practical application	_	ltural methods	discussion	
				ating the pest		
11	2	Save, understand,		ole of legislative	Lecture and	Quick exam
10		practical application			discussion	
12	2	Save, understand, practical application		ole of physical a nical control	Lecture and discussion	Oral tests
13	2	Save, understand, practical application	Use w some	ater to control pests	Lecture and discussion	Quick exam
14	2	Save, understand,	Softw	are design and	Lecture and	Oral tests
		practical application	in inte	egrated	discussion	
			1	gement progran		
15	2	Save, understand,		successful	Lecture and	Quick exam
		practical application	-	oles of integrate	discussion	
			_	anagement and		
11	<u>С</u> Б		future	e prospects.		
	Course Eva					
•	exam; 10 activity; 10					
•	ework; 10	-				
	rts; 10 grad					
-	hly exam ;					
		d Teaching Resources				
Requ	ired textboo	ks (curricular books, if a	any)	1. Integrated p Haj Ismail	est control / D.	Eyad Yousef
Main	references	(sources)		1- Integrated pest control / D. Mahmod Said		
				Al-Zamity		
				2-Integrated ma	-	
				Agricultural pes Arif Ali	sts / D. Abed Al	-star
Recommended books and references (scientific				-Iraqi Agricultu	re Journal	
journ	als, reports.	)		-Magazines dea	ling with beeke	1 0
				-Bulletins issue	d by agricultural	l
				companies		
Electr	ronic Refere	ences, Websites		All agricultural	magazine sites	

			Course D	escription Form		
		e Name:				
Professio						
2. Course Code:						
		ster / Year:				
First sem		/Fourth iption Preparat	ion Dota			
4. D		iption Preparat	ion Date:			
		able Attendanc	e Forms:			
		atory official v				
			ours (Total) / Numl	per of Units (Total	)	
		urs Units 1		11 . 6 . 1	X	
			r's name (mention a	all, if more than on	e name)	
N	Vame					
E	Email					
1						
8. C	Cours	e Objectives				
Course (	Obje		ourse aims to en		0	0
		-	sional standpoint f		·	
		religio	us and societal ax	kis, given that et	hics are someth	ing acquired fr
	religious and societal axis, given that ethics are something acquired fr childhood, in addition to linking these ethics to all work facilities (when					
		childh	ood, in addition t	o linking these e	ethics to all wor	k facilities (whe
		scienti	fic or administrat	ive) and the imp	act of the lack	of a worker's m
		scienti sense	fic or administrat on the continued	ive) and the imp development of	eact of the lack countries. Due t	of a worker's m to the depletion
		scienti sense econor	fic or administrat on the continued nic resources thro	ive) and the imp development of ugh administrativ	eact of the lack countries. Due t ve or scientific fr	of a worker's m to the depletion raud, which leads
		scienti sense econor the fai	fic or administrat on the continued nic resources thro lure of agricultur	ive) and the imp development of ugh administrativ	eact of the lack countries. Due t ve or scientific fr	of a worker's m to the depletion raud, which leads
<u>9</u> T	Teach	scienti sense econor the fai lives of	fic or administrat on the continued nic resources thro lure of agricultur f citizens.	ive) and the imp development of ugh administrativ	eact of the lack countries. Due t ve or scientific fr	of a worker's m to the depletion raud, which leads
		scienti sense econor the fai lives of ing and Learni	fic or administration the continued nic resources throur lure of agricultur f citizens.	ive) and the imp development of ugh administrativ	eact of the lack countries. Due t ve or scientific fr	of a worker's m to the depletion raud, which leads
	Cog	scienti sense of econor the fai lives of ing and Learni gnitive objecti	fic or administration the continued nic resources throur lure of agricultur f citizens.	tive) and the imp development of ugh administrative al projects that	eact of the lack countries. Due t we or scientific fr may lead to disa	of a worker's m to the depletion raud, which leads asters that lead t
	Cog A1-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co	fic or administration the continued nic resources throur lure of agricultur ficitizens.	ive) and the imp development of ugh administrativ al projects that nal ethics in its ge	eact of the lack countries. Due t we or scientific fr may lead to disa	of a worker's m to the depletion raud, which leads asters that lead t
	Cog A1- sen	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im	fic or administration the continued nic resources through the continued nic resources through the control of agricultur for the control of agricultur for the control of agricultur for the control of th	tive) and the imp development of ugh administrative al projects that nal ethics in its ge ethics.	act of the lack countries. Due to ve or scientific fr may lead to disa neral, linguistic,	of a worker's m to the depletion raud, which leads asters that lead t
	Cog A1- sen A2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the	fic or administration the continued nic resources throur lure of agricultur ficitizens.	tive) and the imp development of a ugh administrative al projects that nal ethics in its ge ethics. codes, their develo	act of the lack countries. Due to ve or scientific fr may lead to disa neral, linguistic, opment, and the	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh
	<ul> <li>Cog</li> <li>A1-</li> <li>sen</li> <li>A2-</li> <li>A3-</li> <li>B -</li> </ul>	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the The skills obj	fic or administration the continued nic resources throur of agricultur ficitizens. Ing Strategies ves ncept of profession portance of those thistory of ethical of the moral disaster jectives of the cour	tive) and the imp development of ough administrative al projects that the nal ethics in its ge ethics. codes, their develops that occurred d	act of the lack countries. Due to ve or scientific fr may lead to disa neral, linguistic, opment, and thei ue to the lack of	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi
	Cog A1- sen A2- A3- B - B1	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th	fic or administration the continued nic resources through the continued nic resources through the formation of agricultur of agricultur of agricultur of the second strategies strategies strategies strategies strategies of the second strategies of the course of the course of the course soft the course	tive) and the imp development of a ugh administratival projects that nal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do	act of the lack countries. Due to ve or scientific fir may lead to disa neral, linguistic, opment, and the ue to the lack of	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi
Strategy	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor	fic or administration the continued nic resources throur of agricultur ficitizens. Ing Strategies ves ncept of profession portance of those thistory of ethical of the moral disaster jectives of the cour	tive) and the imp development of a ugh administratival projects that nal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do	act of the lack countries. Due to ve or scientific fir may lead to disa neral, linguistic, opment, and the ue to the lack of	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi
Strategy 10. Cou	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize the - Monitor wor	fic or administration the continued nic resources through the continued nic resources through the second strategies in the second strategies is the second strategies is the moral disaster sectives of the count of the second strategies is the second strategies of the count of the second strategies is the second strategies of the count of the second strategies is the second strategies of the count of the second strategies is the second strategies of the count of the second strategies is the se	tive) and the imp development of ough administrative al projects that the nal ethics in its ge ethics. codes, their develops that occurred d rs that occurred d rse. void chaos that do good supervision is	act of the lack countries. Due to ve or scientific fr may lead to disa neral, linguistic, opment, and the ue to the lack of bes not lead to re system.	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi aping its fruits.
Strategy	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor	fic or administration the continued nic resources through the continued nic resources through the content of agricultur for the content of agricultur for the content of th	ive) and the imp development of ugh administrativ al projects that nal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do good supervision	act of the lack countries. Due to we or scientific firmay lead to disa neral, linguistic, opment, and their ue to the lack of bes not lead to re system. Learning	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi aping its fruits.
Strategy 10. Cou	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize the - Monitor wor	fic or administration the continued nic resources through the continued nic resources through the second strategies for a gricultur of a gricultur of a gricultur of citizens. Ing Strategies the second strategies of profession portance of those of the second strategies of the moral disaster of the moral disaster of the second strategies of the counter work well and a second strategies of the s	tive) and the imp development of ough administrative al projects that the nal ethics in its ge ethics. codes, their develops that occurred d rs that occurred d rse. void chaos that do good supervision is	act of the lack countries. Due to ve or scientific fr may lead to disa neral, linguistic, opment, and the ue to the lack of bes not lead to re system.	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi aping its fruits.
Strategy           10.         Cou           Week	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize the - Monitor wor	fic or administration the continued nic resources throur of agricultur ficitizens. Ing Strategies the second seco	tive) and the imp development of ough administrative al projects that the nal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do good supervision to Unit or subject name	act of the lack countries. Due to we or scientific firmay lead to disa neral, linguistic, opment, and their ue to the lack of bes not lead to re system. Learning	of a worker's m to the depletion raud, which leads asters that lead to and terminologic ir interrelationsh professional ethic aping its fruits.
Strategy 10. Cou	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize the - Monitor wor Structure Hours	fic or administration the continued nic resources throur of agricultur ficitizens.	ive) and the imp development of ugh administrativ al projects that nal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do good supervision	act of the lack countries. Due to ve or scientific firmay lead to disa neral, linguistic, opment, and their ue to the lack of bes not lead to re system. Learning method Practical	of a worker's m to the depletion raud, which leads asters that lead to and terminologic ir interrelationsh professional ethic aping its fruits.
Strategy           10.         Cou           Week	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor Structure Hours One hour	fic or administration the continued nic resources through the continued nic resources through the content of agricultur for a	ive) and the imp development of ugh administrativ al projects that in nal ethics in its ge ethics. codes, their develor is that occurred d rse. void chaos that do good supervision is Unit or subject name The concept of	act of the lack countries. Due to ve or scientific fri may lead to disa neral, linguistic, opment, and the ue to the lack of bes not lead to re system. Learning method	of a worker's m to the depletion raud, which leads asters that lead to and terminologic ir interrelationsh professional ethic aping its fruits. Evaluation method oral
Strategy           10.         Cou           Week	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor Structure Hours One hour	fic or administration the continued nic resources throur of agricultur ficitizens.	ive) and the imp development of ugh administratival projects that in nal ethics in its ge ethics. codes, their develor s that occurred d rse. void chaos that do good supervision in Unit or subject name The concept of professional	act of the lack countries. Due to ve or scientific fri may lead to disa neral, linguistic, opment, and the ue to the lack of oes not lead to re system. Learning method Practical lecture,	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethic aping its fruits. Evaluation method oral
Strategy           10.         Cou           Week	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor Structure Hours One hour	fic or administration the continued nic resources throur of agricultur ficitizens.	ive) and the imp development of ugh administratival projects that in nal ethics in its ge ethics. codes, their develor s that occurred d rse. void chaos that do good supervision in Unit or subject name The concept of professional	act of the lack countries. Due to ve or scientific fri may lead to disa neral, linguistic, opment, and the ue to the lack of oes not lead to re system. Learning method Practical lecture,	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethic aping its fruits. Evaluation method oral
Strategy 10. Coι Week first	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co- se and the im - Identify the - List some of The skills obj - Organize th - Monitor wor Structure Hours One hour theoretically	fic or administration the continued nic resources throur of agricultur ficitizens. Ing Strategies in the second s	ive) and the imp development of ugh administratival projects that in hal ethics in its ge ethics. codes, their develors that occurred d rse. void chaos that do good supervision in Unit or subject name The concept of professional ethics Sources of professional	act of the lack countries. Due to we or scientific firmay lead to disa neral, linguistic, opment, and their ue to the lack of bes not lead to resystem. Learning method Practical lecture, discussion, Practical lecture and	of a worker's m to the depletion raud, which leads asters that lead t and terminologic ir interrelationsh professional ethi aping its fruits. Evaluation method oral examinations
Strategy 10. Coι Week first	/ Cog A1- sen A2- A3- B - B1 B2-	scienti sense of econor the fai lives of ing and Learni gnitive objecti - Study the co- se and the im - Identify the - List some of The skills obj - Organize the - Monitor wor Structure Hours One hour theoretically	fic or administration the continued nic resources throur of agricultur ficitizens.	ive) and the imp development of ugh administratival projects that in nal ethics in its ge ethics. codes, their develor s that occurred d cse. void chaos that do good supervision in Unit or subject name The concept of professional ethics Sources of	act of the lack countries. Due to ve or scientific frimay lead to disa neral, linguistic, opment, and the ue to the lack of oes not lead to re system. Learning method Practical lecture, discussion, Practical	of a worker's m to the depletion raud, which leads asters that lead to and terminologic ir interrelationsh professional ethic aping its fruits. Evaluation method oral examinations

third	One hour theoretically	memorizing, understanding, analyzing, and	Family and socialization Professional	Practical lecture, discussion,	oral examinations
fourth	One hour theoretically	applying memorizing, understanding, analyzing, and	ethics Elements of professional ethics	Practical lecture and discussion	oral examinations
Fifth	One hour theoretically	applying memorizing, understanding, analyzing, and applying	General components of professional ethics	examination	writing examinations
Sixth	One hour theoretically	memorizing, understanding, analyzing, and applying	First test	Practical lecture, discussion,	oral examinations
seventh	One hour theoretically	memorizing, understanding, analyzing, and applying	Meansofestablishingprofessionalethics	Practical lecture, discussion,	oral examinations
Eighth	One hour theoretically	memorizing, understanding, analyzing, and applying	Role models Good deeds	Practical lecture and discussion	oral examinations
Ninth	One hour theoretically	memorizing, understanding, analyzing, and applying	Challenges and their impact on internal professional ethics	Practical lecture, discussion,	oral examinations
Tenth	One hour theoretically	memorizing, understanding, analyzing, and applying	Challenges and their impact on external professional ethics	Practical lecture and discussion	oral examinations
Eleventh	One hour theoretically	memorizing, understanding, analyzing, and applying	Social responsibility (its concept, types, elements, and components)	Practical lecture, discussion,	oral examinations
Twelfth	One hour theoretically	memorizing, understanding, analyzing, and applying	Elements of social responsibility	Practical lecture and discussion	oral examinations
Thirteenth	One hour theoretically	memorizing, understanding, analyzing, and applying	Manifestation s of poor social responsibility	Practical lecture, discussion,	oral examinations
Fourteenth	One hour	memorizing,	The basic	Practical	oral

	theoretically	understanding analyzing, and applying		lecture and discussion	examinations	
fifteenth	One hour theoretically	memorizing, understanding analyzing, and applying		examination	writing examinations	
11. Course	Evaluation					
Attendance 5 Final exam 5		aily assignments	s 2 + reports 3 + writ	ten exam $40 = 50$	quest +	
	ng and Teaching					
-	ktbooks (curricu	lar books, if	Professional ethics from an academic perspective,			
any)			written by Dr. Salam Jassim Hammoud Al-Ardi and teacher Miqdad Jassim Abd			
Main references (sources)			Lectures on professional ethics for Qamiha Publishing_Partie1			
Recommended books and references (scientific journals, reports)			s Lessons in professional ethics.			
Electronic R	eferences, Webs	ites	Some of the global websites specialized in studying professional ethics in its academic form			

Acarolo 2. ( 3. Second		ame:	Course Description				
2. ( 3. 5 Second							
3. Second	Course Co						
Second	2. Course Code:						
Second							
	Semester	/ Year:					
4. 1	Second semester / Fourth year						
	Descriptio	on Preparation D	te:				
2024/02							
5.	Available	Attendance For	18:				
Presence	-						
			Cotal) / Number of U	nits (Total	)		
		oretical + 30 prac					
		lministrator's na	e (mention all, if me	ore than or	ne name)		
	Name:						
]	Email:						
8 (	Course O	biectives					
	Objective	8	ching the student ab	out the tyr	es of mites that i	nfect economic	
000000	oojeeuve		s, domestic animals,	• -			
		-	ermine the economi			nage	
			ntify the different en				
			the spread of mites				
			• Identify the mite hosts that infect plants in particular				
			<ul><li>The pathological symptoms it causes</li><li>Applying the best methods to combat diseases through methods</li></ul>				
0 /	T1		nical, biological, int	egrated con	ntrol programme	(S)	
		and Learning St					
Strateg	y		ognitive objectives	about the	discourses that offe	at arabida and t	
			1- The student will learn about the diseases that affect orchids and t names.				
			arn about the transn	vission of t	nathogens from c	one field to anot	
				-			
			or the spread of the pathogen through the same field. 3- The student will learn how to prevent and control the occurrence				
			diseases.				
		4- 7	be able to find solu	tions in ca	ses of rapidly sp	reading epide	
			ses and ways to con				
			entify quick ways to	U		1	
			ne student will be ab	le to disser	minate the inform	nation obtained	
			ol the pest.	6.1			
			he skills objectives				
			e student will learn h				
			hat the student will	be able to	o treat mite infe	stations that al	
			us plants. be proficient in using	na nest cor	ntrol machines		
			be proficient in using be proficient in using the proficient in using the proficient in using the proficient in the prof			d methods of r	
		cont	-	sing mout		a monous or p	
10. Co	ourse Stru						
Week	Hours	Required Lea	ning Unit or sub	iect	Learning	Evaluation	
		Outcomes	name		method	method	
1	4	Memorizati	n, Acarol	ogy	Lecture and	Oral exams	

		understanding,		discussion	
		practical application			
2	4	Memorization,	Taxonomic position	Lecture and	
		understanding,	of mites within the	discussion	Oral exams
		practical application	kingdom Arthropoda	enseussion	
3	4		The taxonomic		
		Memorization,	position of the mite	Lecture and	
		understanding,	within the Acari-	discussion	Oral exams
		practical application	order and sub-order		
			Mites		
4	4	Memorization,	The economic	Lecture and	
		understanding,	importance of the	discussion	Oral exams
		practical application	dream		
5	4	Memorization,	Methods of dispersal	Lecture and	
		understanding,	of mite families	discussion	Oral exams
	4	practical application			
6	4	Memorization,	The most important	Lecture and	
		understanding,	theories of silk	discussion	Oral exams
7	4	practical application	spinning		
7	4	Memorization,	Written exam	Lecture and discussion	Oral arrang
		understanding,			Oral exams
8	4	practical application	Habits and habitat		
8	4	Memorization, understanding,	Habits and habitat	Lecture and discussion	Oral exams
		practical application			Orar exams
9	4	Memorization,	<b>Deproduction</b> in a		
9	4	understanding,	Reproduction in a dream	Lecture and	Oral exams
		practical application	uicaili	discussion	Of al CAallis
10	4	Memorization,	The external		
10		understanding,	appearance of the	Lecture and	Oral exams
		practical application	dream	discussion	orur exturns
11	4	Memorization,	Various dream		
		understanding,	devices	Lecture and	Oral exams
		practical application	4011005	discussion	0100 0100
12	4	Memorization,	Pest resistance to		
		understanding,	chemical pesticides	Lecture and	Oral exams
		practical application	r	discussion	
13	4	Memorization,	Anti-dream	T 1	
		understanding,		Lecture and	Oral exams
		practical application		discussion	
14	4	Memorization,	Integrated crop	I a atrena1	
		understanding,	management	Lecture and discussion	Oral exams
		practical application		discussion	
15	4	Memorization,	Written exam	Lecture and	
		understanding,		discussion	Oral exams
		practical application		uiscussion	
11. Co	ourse Eval	luation			
			ding to the tasks assigned	ed to the studen	t such as daily
			en exams, reportsetc		
	-	d Teaching Resources			
Require	d textboo	ks (curricular books, if		harmful to econ	-
			Translated by <b>F</b>	Dr. Jalil Abu Al-H	Hob

	.2Non-insect animal pests		
Main references (sources)	.1Non-insect animal pests / practical part		
	.2Mice and ticks / Jobson		
Recommended books and references (scientific	-Iraqi Agriculture Journal		
journals, reports)	-Magazines dealing with pests and pesticides		
	-Bulletins issued by agricultural companies		
	and pesticide companies		
Electronic References, Websites	-All agricultural magazine sites and		
	magazines dealing with mites and ticks		

	Course Description Form
1. Course Name:	
Biological Control	
2. Course Code:	
3. Semester / Ye	ar:
Autumn Semester / 20	
4. Description Pr	
27 / 12 / 2023	
5. Available Atte	endance Forms:
Courses	
6. Number of Cr	edit Hours (Total) / Number of Units (Total)
60 hours / 3 u	nits
	istrator's name (mention all, if more than one name)
Name:	
Email:	
8. Course Object	ives
Course Objectives	Study the evolution of the thought of biological control
Course objectives	of insect pests
	<ul> <li>Study the philosophy of vital enemies</li> </ul>
	<ul> <li>The importance of information in pest control</li> </ul>
	<ul> <li>Knowledge of pest control methods and alternatives to</li> </ul>
	integrated control
	Identify the biological control
	Identify the philosophy of biological control
	Identify the life of vital enemies
9. Teaching and	Learning Strategies
Strategy	A-Cognitive objectives
	A-1: Identify the biological control
	A-2 - Identify the philosophy and principles of biological control
	A-3 - Information gathering and injury forecasting - Develop an
	integrated control program
	A-4 that the student mastered how to prevent the occurrence of
	diseases and control.
	A.5. Be able to find solutions in the case of epidemic epidemics
	and ways of controlling them. A-6 that the student acquires how to disseminate the information
	obtained in the control of insect pests.B- the skills objectives of the
	program;
	B- the skills objectives of the program;
	B - 1 - Students' knowledge of the biological control programs for
	each crop
	B-2 - Decision-making quickly to control pests
	B - 3 - access to the information network and know the talk in the
	fight against insect pests
	B - 4 - The use of modern technology in the prediction of infection
	and conduct appropriate control
	B - 5 - To master the use of modern methods and advanced contr
10. Course Structure	

Week	Hours	Required	Unit or subject	Learning	Evaluation
		Learning	name	method	method
		Outcomes			
1	4	Save, understand,	Introduction to the r	Lecture and	Oral tests
		practical applicatio	of bio-resistance in	discussion	
			plant protection		
2	4	Save, understand,	Procedures for	Lecture and	Quick exam
		practical applicatio	introducing vital	discussion	
			1.enemies:		
			Diagnosis of the		
			lesion as an alien		
			species.		
			2. Determine the		
			original habitat of		
			the pest.		
			3. External explorati		
			of vital enemies.		
3	4	Save, understand,	Quarantine of	Lecture and	Oral tests
		practical applicatio	imported models.	discussion	
			education and mass		
			propagation of vital		
			enemies.		
4	4	Save, understand,	Final evaluation of	Lecture and	Quick exam
		practical applicatio	vital enemies	discussion	
			((isolation and		
			exclusion method,		
			construction of life		
			tables)).		
5	4	Save, understand,	mportant groups of	Lecture and	Oral tests
		practical applicatio	insect parasites	discussion	
			Ranks to		
			which parasitic		
			insects belong:		
			-1Membranes of		
			paranormal wings.		
			Parasites of the win		
			type.		
6	4	Save, understand,	Incomplete phases	Lecture and	Quick exam
		practical applicatio	of parasitic	discussion	
			insects:		
			Types of eggs		
7	4	Save, understand,	-Types of larval	Lecture and	Written exan
		practical applicatio	ages.	discussion	
			- Important groups		
			insect predators		
8	4	Save, understand,	Ranks to which	Lecture and	Oral tests
		practical applicatio	predatory insects	discussion	
			belong:		
			The rank of the		
			May fly.		
			The rank of shivers.		
9	5	Save, understand,	Rank straight	Lecture and	Quick exam

		practical applicatio	wings. Half - wing rank.	discussion		
10	4	Save, understand, practical applicatio	Rank of the wings. Rank with two wing	Lecture and discussion	Oral tests	
11	4	Save, understand, practical applicatio	Rank of membranous wings. Rank of sheath wing	Lecture and discussion	Quick exam	
12	4	Save, understand, practical applicatio	Pathogens: Types of bacteria viruses in resistance insect pests	Lecture and discussion	Oral tests	
13	4	Save, understand, practical applicatio	Types of pathogenic fungi	Lecture and discussion	Quick exam	
14	4	Save, understand, practical applicatio	Types of insect pathogenic worms	Lecture and discussion	Oral tests	
15	4	Save, understand, practical applicatio	Biological resistanc the bush using insec		Quick exam	
11. Course Eva	aluation				•	
Daily exam ; 10	grades					
Daily activity; 1	U					
Homework; 10						
Reports ; 10 gra						
Monthly exam ;	-					
12. Learning a						
-	x	cular books, if any)	Zubaidy	1. Biological Control / D. Hamza Kadum Zubaidy		
Main references	(sources)		Action and s Al-Malah 2-Biological pests / D. Ah	mechanism of Action and sustainability / D. Nazar Must		
Recommended books and references (scientific journals, reports)			tific -Iraqi Agricu -Magazines o -Bulletins iss companies	1		
Electronic Refer	rences, W	ebsites	All agricultu	ral magazine si	tes	

Course Description Form									
	1. Course Name:								
Field cro	Field crop diseases								
2. Course Code:									
3. 5	Semester /	Year:							
		cond year							
		n Preparation Date:							
2024 \2		1							
		Attendance Forms:							
ľ	ny presen	ce							
6. I	Number of	f Credit Hours (Total) /	Number of Units (Total	)					
6	50 hours (	30 theoretical + 30 prac	ctical) / 3 units						
7. (	Course ad	ministrator's name (mer	ntion all, if more than on	e name)					
-	Name:								
	Email:								
1	Course Ob								
Course (	Objectives	e	tudent to the various typ		nat affect field cr				
			viral, nematode, and phy	-					
			onomic importance of th						
			environmental factors	and their impac	ct on the spread				
		infectious plant dis	ptoms caused by these d	icancac					
			ways to combat disease		ds (natural appli				
			ltural, biological, legis						
		control programs)	itului, biologicul, logist	lutive, enemieur,	, genetie, integre				
9. ]	<b>Feaching</b>	and Learning Strategies							
Strategy		ognitive objectives							
		e student should know t	he diseases that affect a	gricultural crops	and their names.				
	* To	try to find out how path	nogens are transmitted fr	om one research	to another or th				
		ative spread through the							
			ow to prevent and control						
			is in cases of rapid epide		d control them.				
			ds of disease diagnosis a		1 . 1.				
			w to disseminate the inf	ormation obtaine	ed in disease				
10 C-		llance.							
	urse Stru		Unit on subject	Loomina	Evoluction				
Week	Hours	Required Learning	Unit or subject	Learning method	Evaluation				
1	4	Outcomes Memorization,	name Introduction to field	Lecture and	methodOral exams				
	+	understanding,	crop diseases	discussion	Orai Granis				
		practical applicatio		41504551011					
2	4	Memorization,	Wheat diseases	Lecture and	Quick exam				
	-	understanding,		discussion					
		practical applicatio							
3	4	Memorization,	Barley diseases	Lecture and	Oral exams				
		understanding,	-	discussion					
		practical applicatio							
4	4	Memorization,	Rice diseases	Lecture and	Quick exam				
		understanding,		discussion					
		practical applicatio							
	practical applicatio								

					-	
5	4	Memorization,	Maiz	e diseases	Lecture and	Oral exams
		understanding,			discussion	
		practical applicatio				
6	4	Memorization,	Sorgl	num diseases	Lecture and	Quick exam
		understanding,			discussion	
		practical applicatio				
7	4	Memorization,	Writt	en exam	Written exam	Written exam
		understanding,				
		practical applicatio				
8	4	Memorization,	Bean	diseases	Lecture and	Oral exams
		understanding,			discussion	
		practical applicatio				
9	4	Memorization,	Disea	uses of oil crops	Lecture and	Quick exam
		understanding,	(sunf	lower, safflower	discussion	
		practical applicatio				
10	4	Memorization,		ases of oil crops	Lecture and	Oral exams
		understanding,	(soy	bean, pistachio,	discussion	
		practical applicatio		ume)		
11	4	Memorization,	Disea	uses of sugar cro	Lecture and	Quick exam
		understanding,			discussion	
		practical applicatio				
12	4	Memorization,	Disea	uses of cotton an	Lecture and	Oral exams
		understanding,	flax		discussion	
		practical applicatio				
13	4	Memorization,	Disea	ases of forage cr	Lecture and	Quick exam
		understanding,			discussion	
		practical applicatio				
14	4	Memorization,	Toba	cco diseases	Lecture and	Oral exams
		understanding,			discussion	
		practical applicatio				
15	4	Memorization,	Writt	en exam	Written exam	Written exam
		understanding,				
		practical applicatio				
11. Co	ourse Eval	uation				
		s: (daily exams - monthl	-			
		daily exams - monthly e	exams -	oral exams)		
		practical reports				
		nination and practical ex	xperime	nts		
		d Teaching Resources				
Require	d textboo	ks (curricular books, if a	any)		cs of fungi and th	neir diseases / D
				Majeed Al-Sh		
					field crops / Dr.	Maysar Zarzis
Main ref	ferences (	sources)		- Iraqi Agricu		
					lealing with disea	ses of all field
				crops		
				- Bulletins iss	ued by agricultur	ral companies
				pesticide com	*	
		ooks and references (scie	entific		ral magazine site	es and crop dise
-	, reports			magazines		
		nces, Websites		- world W	7' 1 337 1	

		ourse Description Form
	irse Name:	
Pesticides	~ .	
	irse Code:	
0014402		
3. Sen	nester / Year:	
First semes	ter/2023-2024	
4. Des	cription Preparation Date:	
03/02/2024		
5. Ava	ilable Attendance Forms:	
6. Nur	nber of Credit Hours (Tota	al) / Number of Units (Total)
60 I	Hours / Units 3	
7. Cou	rse administrator's name (	mention all, if more than one name)
Nar	ne: Malik hasan karem	
	ail: malik.hasan@mu.edu.i	q
8. Cou	irse Objectives	
Course Ob	jectives	1. Understanding the theoretical foundations: achieving a understanding of the chemical and biological basics of pesticides.
		2. Environmental impact analysis: Understanding the eff
		of pesticides on the environment and how to reduce negative effects.
		3. Health effects analysis: Understanding the health effect of the proper and improper use of pesticides and how to prevent risks.
		<ul> <li>4. Safe and effective use: Teaching students how to use pesticides in a safe and effective way and ensuring adherence to safety instructions.</li> </ul>
		5. Developing research skills: Motivating students to sea for modern and reliable information on the topic of chem
		<ul> <li>pesticides.</li> <li>6. Promoting critical thinking: Encouraging students to t critically about the need and potential effects of pesticid use.</li> </ul>
		7. Promoting social participation: Supporting stud communication with pesticide issues and participatin sustainable development solutions.
9. Tea	ching and Learning Strates	I
Strategy	1. Providing content: p	roviding detailed information about the types of pesticides a
	their use clearly.	
		Encouraging students to experiment with using pesticides i ces their practical understanding of the subject.
	3. Discussion: Encoura	ging students to discuss the environmental and health impac
	-	ticides and stimulating critical thinking. nation about research and developments in the field of chem
	pesticides.	nation about research and developments in the neid of chem
	-	conduct research on the use of pesticides and their effects,
	which enhances researce	
		is to participate in class discussions and exchange experience
	on the topic of chemica	

7. Using technology, such as videos and simulations, to illustrate chemical processe and the effects of pesticides.

Provide periodic evaluation of students' progress and ensure their con understanding of the content.

	ourse Stru		<b>T</b> T •/ <b>T</b> • /	<b>T</b> •	
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Memorization, understanding, practical application	Agricultural pests, the damage they cause, and the economic critical limit	Lecture, discussio and oral examinations	oral examinat
2	4	Memorization, understanding, practical application	Pesticides, definition of pestici The pros and cons of pesticides historical review of the use of pesticides.	Lecture, discussio and oral examinations	quiz
3	4	Memorization, understanding, practical application	Points to be followed during chemical control.	Lecture, discussio and oral examinationsNs	Oral exam
4	4	Memorization, understanding, practical application	Toxicology, acute toxicity, chr toxicity, pesticide fading.	Lecture, discussio and oral examinationsNs	quiz
5	4	Memorization, understanding, practical application	Metabolism of chemical pesticides, metabolic enzymes, general methods of metabolism		Oral exam
6	4	Memorization, understanding, practical application	Classification of pesticides, bas of classification according to p toxicity, method of action, form of preparation and the role of additives in activating or inhibi pesticides.	Lecture, discussio and oral examinationsNs	quiz
7	4	Memorization, understanding, practical application	Systemic pesticides.	Lecture, discussio and oral examinationsNs	Exam
8	4	Memorization, understanding, practical	Absorption and transfer of chemical pesticides and factors affecting this.	Lecture, discussio and oral	quiz

9       4       Memorization, understanding.practical application       Insecticides, inorganic pesticide pesticides, carbanate pesticide pesticides, carbanate pesticide pesticides, carbanate pesticide periodical synaphysication       Cerure, discussio and oral examinationsNs       Oral exam         10       4       Memorization, understanding.practical application       Insect growth regulators.       examinationsNs       quiz         11       4       Memorization, understanding.practical application       Fungicides       examinationsNs       Quiz         12       4       Memorization, understanding.practical application       Fungicides       examinationsNs       Quiz         13       4       Memorization, understanding.practical application       Rodenticides.       examinationsNs Lecture, discussio and oral examinationsNs       Quiz         14       4       Memorization, understanding.practical application       Nematicides.       examinationsNs Lecture, discussio and oral examinationsNs       Quiz         15       4       Memorization, understanding.practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsNs       Exam         11. Course Evaluation       Verture exams, reports, etc.       12       Exam       Exam         15       4       Memorization, understanding, practical application       Mite pesticides. understanding, practical application		1	1	1	,	
11       4       Memorization, understanding, practical application       Fungicides       examinationsNs       Oral exam         11       4       Memorization, understanding, practical application       Fungicides       examinationsNs       Oral exam         12       4       Memorization, understanding, practical application       Weedicides       examinationsNs Lecture, discussio and oral examinationsNs       quiz         13       4       Memorization, understanding, practical application       Rodenticides       examinationsNs Lecture, discussio and oral examinationsN       Oral exam         14       4       Memorization, understanding, practical application       Nematicides.       examinationsNs Lecture, discussio and oral examinationsN       quiz         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         11. Course Evaluation       D       D       Exam       Exam         12. Learning and Teaching Resources       examinationsN       Exam         Required textbooks (curricular books, if any)       · Chemical pesticides mode of action         Main references (sou	9		understanding, practical application	and oils), organochlorine pesticides, organophosphorus pesticides, carbamate pesticide pyrethroid pesticides, neonicotinoid pesticides, and chemicals that inhibit insect reproduction	Lecture, discussio and oral examinationsNs	Oral exam
12       4       Memorization, understanding, practical application       Weedicides       examinationsNs         12       4       Memorization, understanding, practical application       Weedicides       examinationsNs Lecture, discussio and oral examinationsN       quiz         13       4       Memorization, understanding, practical application       Rodenticides       examinationsNs Lecture, discussio and oral examinationsN       Oral exam         14       4       Memorization, understanding, practical application       Nematicides.       examinationsNs Lecture, discussio and oral examinationsN       quiz         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         11. Course Evaluation       Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.       12. Learning and Teaching Resources         Required textbooks (curricular books, if any)       -       Chemical pesticides mode of action         Main references (sources)       -       Chemical pesticides mode of action	10	4	understanding, practical	Insect growth regulators.	Lecture, discussio and oral	quiz
13       4       Memorization, understanding, practical application       Rodenticides       examinationsNs Lecture, discussio and oral examinationsN       Oral exam         13       4       Memorization, understanding, practical application       Rodenticides       examinationsNs Lecture, discussio and oral examinationsN       Oral exam         14       4       Memorization, understanding, practical application       Nematicides.       examinationsNs Lecture, discussio and oral examinationsN       quiz         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN       Exam         11. Course Evaluation       Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.       III.         12. Learning and Teaching Resources       exquired textbooks (curricular books, if any)       -         Main references (sources)       - Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)       - Chemical pesticides mode of action	11	4	understanding, practical	Fungicides	Lecture, discussio and oral	Oral exam
1       understanding, practical application       understanding, practical application       Lecture, discussio and oral examinationsN         14       4       Memorization, understanding, practical application       Nematicides.       examinationsNs Lecture, discussio and oral examinationsN         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN         11. Course Evaluation       Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.       12. Learning and Teaching Resources         Required textbooks (curricular books, if any)       - Chemical pesticides mode of action         Main references (sources)       - Chemical pesticides mode of action	12	4	understanding, practical	Weedicides	Lecture, discussio and oral	quiz
1       i       understanding, practical application       Lecture, discussio and oral examinationsN         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN         15       4       Memorization, understanding, practical application       Mite pesticides.       examinationsNs Lecture, discussio and oral examinationsN         11. Course Evaluation       Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.       12. Learning and Teaching Resources         Required textbooks (curricular books, if any)       - Chemical pesticides mode of action         Main references (sources)       - Chemical pesticides mode of action	13	4	understanding, practical	Rodenticides	Lecture, discussio and oral	Oral exam
understanding, practical application       Lecture, discussio and oral examinationsN         11. Course Evaluation       Image: Constraint of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.         12. Learning and Teaching Resources       Image: Constraint of the student of t	14	4	understanding, practical	Nematicides.	Lecture, discussio and oral	quiz
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.         12. Learning and Teaching Resources         Required textbooks (curricular books, if any)         Main references (sources)         • Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)	15	4	understanding, practical	Mite pesticides.	Lecture, discussio and oral	Exam
preparation, daily, oral, monthly, written exams, reports, etc.         12. Learning and Teaching Resources         Required textbooks (curricular books, if any)         Main references (sources)         - Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)	11. C	Course Eva	luation		1	
12. Learning and Teaching Resources         Required textbooks (curricular books, if any)         Main references (sources)         - Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)					d to the student, s	uch as daily
Required textbooks (curricular books, if any)         Main references (sources)         - Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)	1 1			exams, reports, etc.		
Main references (sources)       - Chemical pesticides mode of action         Recommended books and references (scientific journals, reports)       - Chemical pesticides mode of action		-		anv)		
Recommended books and references (scientific journals, reports)	requi			····· ,		
journals, reports)	Main r	references	(sources)	- Chemical p	esticides mode of	action
Electronic References, Websites				(scientific		
	Electro	onic Refer	ences, Websites			

1. Course Name:

Plant viruses

2. Course Code:

3. Semester / Year:

Second semester/2023-2024

4. Description Preparation Date:

03/02/2024

5. Available Attendance Forms:

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

60 Hours / 3 Units

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

Name:

Email:

8. Course Objectives

Course Objectives

9. Teaching and Learning Strategies

Strategy

PowerPoint presentation via the Data show screen Direct delivery method and detailed explanation By showing illustrative films.

10. Co	ourse Stru	cture			
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Memorization, understanding, practical application	overview of the g evolution of virology	Lecture, discuss and examinations	oral xaminations
2	4	Memorization, understanding, practical application	The most import characteristics to distinguish viruses fr microorganisms other organisms	Lecture, discuss and examinations	quiz
3	4	Memorization, understanding, practical application	The econo importance of v plant diseases	1	Oral exam

4	4	Memorization, understanding, practical application	Naming and classify viruses	Lecture, discuss and examinationsNs	quiz
5	4	Memorization, understanding, practical application	Chemical structure viruses		Oral exam
6	4	Memorization, understanding, practical application	Morphological characteristics viruses	Lecture, discuss and examinationsNs	quiz
7	4	Memorization, understanding, practical application	Virus infecti movement, transmission wit plant tissues	Lecture, discuss and examinationsNs	Exam
8	4	Memorization, understanding, practical	Viruses multiply	Lecture, discuss and oral	quiz
9	4	Memorization, understanding, practical application	Mixed infection v viruses and their ef on plants	examinationsNs Lecture, discuss and examinationsNs	Oral exam
10	4	Memorization, understanding, practical application	Symptoms of viral pl diseases: exter internal, and enclo bodies	Lecture, discuss	quiz
11	4	Memorization, understanding, practical application	Methods transmission and spr of plant viruses	examinationsNs Lecture, discuss and examinationsNs	Oral exam

12	4	Memorization, understanding, practical application	Virus	diagnosis	examinationsNs Lecture, discuss and examinationsN	quiz
13	4	Memorization, understanding, practical application	Resist: disease		examinationsNs Lecture, discuss and examinationsN	Oral exam
14	4	Memorization, understanding, practical application	The viruse vegeta	most impor s that ir ble crops	examinationsNs Lecture, discuss and examinationsN	quiz
15	4	Memorization, understanding, practical application	viruse	ost important s that infect ble crops	examinationsNs Lecture, discuss and examinationsN	Exam
11. (	Course Evalu	ation	l			
Distril prepar 12. I	bution of the ration, daily, Learning and	grade out of 100 accor oral, monthly, written of Teaching Resources	exams, 1		ned to the student.	, such as daily
-	red textbook references (s	s (curricular books, if a ources)	ny)	Chara	blant -virology/ cterization of plan ra and Govind prat	
	nmended boo als, reports)	oks and references (sci	entific			
0	· 1 /	ces, Websites		www.NCBI.c	om V.ICOPV.com	

			<b>Course Description</b>	ı Form						
1. (	Course Na	ame:	<b>^</b>							
	English									
2. (	Course Co	ode:								
3. Semester / Year:										
Semester $2 \downarrow 4$										
4. Description Preparation Date:										
	4/3/2024	4								
5. A	Available	Attendance Form	18:							
ŀ	Attendanc	e								
			Total) / Number of Un	nits (Total	)					
	30 h/ 2 ui									
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	Name:									
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0 1										
	Course Ol	0	a ahina -t Jt. P							
Course	Objectiv		aching students Eng ying to employ the l	9 0	0	the school				
			iculum	English la	inguage to serve	e the school				
			aching students skil	lle that he	In them nose in	tornational				
			uage tests	iis mat iic	ip them pass in					
		0	otivating students to	research	foreign sources	S				
			rving final stage stu							
			rite research paper							
			iving students the	0	<b>•</b> •					
			sites of scientific		•					
			forms	Journa						
9. ]	Feaching									
				-1-:11		9. Teaching and Learning Strategies				
	<b>Strategy</b> Students are taught English language skills such as listening, reading, writing,					eading, writing,				
and grammar through available learning methods such as projectors in										
		and grammar th		arning m	ethods such as	s projectors in				
		and grammar th	nrough available le	arning m direct di	ethods such as scussion method	s projectors in ds, quick tests,				
		and grammar the classrooms, hom oral and written of tests and other	nrough available le ework assignments, exams, and various skills, following u	arning m direct di means of 1p on stu	ethods such as scussion method testing such as adents' writings	s projectors in ds, quick tests, multiple choice s in the daily				
		and grammar the classrooms, hom oral and written of tests and other preparation journ	nrough available le ework assignments, exams, and various skills, following un nal, and correcting	arning m direct di means of up on stu errors.	ethods such as scussion method testing such as idents' writings Spelling in it,	s projectors in ds, quick tests, multiple choice s in the daily with students				
		and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the	nrough available le ework assignments, exams, and various skills, following unal, and correcting ne form of groups	arning m direct di means of ap on stu errors. that dea	ethods such as scussion method testing such as udents' writings Spelling in it, l with writing	s projectors in ds, quick tests, multiple choice s in the daily with students				
10 7		and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the agricultural repor	nrough available le ework assignments, exams, and various skills, following un nal, and correcting	arning m direct di means of ap on stu errors. that dea	ethods such as scussion method testing such as udents' writings Spelling in it, l with writing	s projectors in ds, quick tests, multiple choice s in the daily with students				
	urse Struc	and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the agricultural repor- cture	nrough available le ework assignments, exams, and various skills, following unal, and correcting ne form of groups ts to develop academ	arning m direct di means of ap on stu errors. that dea nic writing	ethods such as scussion method testing such as udents' writings Spelling in it, l with writing skills.	s projectors in ds, quick tests, multiple choice s in the daily with students and preparing				
10. Со <b>Week</b>		and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the agricultural repor- cture <b>Required Lear</b>	nrough available le ework assignments, exams, and various skills, following unal, and correcting the form of groups ts to develop academ ning Unit or subj	arning m direct di means of ap on stu errors. that dea nic writing	ethods such as scussion method testing such as udents' writings Spelling in it, l with writing skills. Learning	s projectors in ds, quick tests, multiple choice s in the daily with students and preparing <b>Evaluation</b>				
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	urse Struc	and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the agricultural report cture Required Learn Outcomes Identify types	rough available le ework assignments, exams, and various skills, following unal, and correcting the form of groups ts to develop academ ning Unit or subj name s of types	arning m direct di means of ap on stu errors. that dea nic writing	ethods such as scussion method testing such as udents' writings Spelling in it, l with writing skills. Learning	s projectors in ds, quick tests, multiple choice s in the daily with students and preparing <b>Evaluation</b> <b>method</b> Daily				
Week first	urse Struc Hours 2	and grammar the classrooms, hom oral and written of tests and other preparation journ distributed in the agricultural repor- cture <b>Required Learn</b> <b>Outcomes</b> Identify types sentences	nroughavailableleeworkassignments,exams, and variousskills,followingnal,andcorrectingneformofgroupststotstoningUnit or subjnamesoftypessentences	arning m direct di means of up on str errors. that dea nic writing ect of	ethods such as scussion method testing such as idents' writings Spelling in it, l with writing skills. Learning method Presence	s projectors in ds, quick tests, multiple choice s in the daily with students and preparing <b>Evaluation</b> <b>method</b> Daily test				
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					T	
Fifth	2	nouns Identify pronouns	pror	iouns	Presence	Daily test
Sixth	2	Identify traits	trait	S	Presence	Daily test
Seventh	2	Recognize the situation	situation		Presence	Daily test
Eighth	2	Recognizing the passive voice	pass	ive voice	Presence	Daily test
Ninth	2	Learn about the simple present	simj	ple present	Presence	Daily test
Tenth	2	present perfect	pres	ent perfect	Presence	Daily test
Elevent	2	Learn about the present continuous tense	pres cont	ent inuous tense	Presence	Daily test
Twelve	2	Identify the types of questions	type ques	s of stions	Presence	Daily test
Thirteer	2	Identify conditional sentences		litional ences	Presence	Daily test
fourteen	2	Learn about ownership	own	ership	Presence	Daily test
Fifteent	2	Identify phrasal verbs with off	phra with		Presence	Daily test
11. Cou	ırse Eval	uation				
		core out of 100 accord oral, monthly, or writte				nt such as daily
		d Teaching Resources		-		
		ks (curricular books, if a	any)			
Main ref	erences (	sources)		Internet	t	
Recomm journals,		books and references (scie	entific			
5	<b>1</b>	nces, Websites		https://l	Pinterest.com	

			se Description Form		
1.	Course N	Name:			
	Ecology				
2.	Course (	Code:			
3.	Semester	r / Year:			
1 0	course $\setminus$				
		ion Preparation Date:202	4/2/2		
2 \2\ 20			11 1 . 1 1 1		
5.	Availabl	e Attendance Forms: we	ekly lecture schedule		
6.	Number	of Credit Hours (Total) /	Number of Units (Tota	l)	
	60 Hours	s \ 3 Units			
7.		dministrator's name (me	ntion all, if more than o	ne name)	
	Name:				
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	Course ( Objectiv	Dbjectives	the concept of the er		
		about the re	lationship of ecology to	Jounce sciences	
9.	Teaching	• Identify the numbers, a unfavorable	environmental factor nd learn about the conditions possibility of benefin nsects	ors affecting in ability of inse	cts to adap
	y	<ul> <li>Identify the numbers, a unfavorable</li> <li>Identify the controlling i</li> </ul>	environmental factored nd learn about the conditions possibility of benefit nsects erPoint via the Data sh wing up on the enviror cts in the laboratory an o determine the degree	ors affecting in ability of inse- iting from the e now screen ment of insects the nd exposing them e of their influence	cts to adapt environment hrough field to various
Strateg	y ourse Str	<ul> <li>Identify the numbers, a unfavorable</li> <li>Identify the controlling i</li> <li>g and Learning Strategies</li> <li>Presentation of Power</li> <li>Observing and follow reality and raising insect environmental factors to interrelationship.</li> <li>Direct delivery mether</li> </ul>	e environmental factore nd learn about the conditions possibility of benefit nsects erPoint via the Data sh wing up on the enviror ets in the laboratory an o determine the degree	ors affecting in ability of inse- iting from the e now screen ament of insects the ad exposing them e of their influence nation	cts to adapt environment hrough field to various ee and study t
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Strateg 10. C Week	y ourse Str Hours	<ul> <li>Identify the numbers, a unfavorable</li> <li>Identify the controlling i</li> <li>g and Learning Strategies</li> <li>Presentation of Powe</li> <li>Observing and follow reality and raising insected environmental factors to interrelationship.</li> <li>Direct delivery mether</li> <li>ucture</li> <li>Required Learning Outcomes</li> </ul>	e environmental factore nd learn about the conditions possibility of benefit nsects erPoint via the Data sho wing up on the enviror cts in the laboratory and o determine the degree od and detailed explan Unit or subject name	ors affecting in ability of inse- iting from the e now screen ment of insects th ad exposing them e of their influence nation Learning method	cts to adapt environment hrough field to various ce and study t Evaluation method
Strateg	y ourse Str	<ul> <li>Identify the numbers, a unfavorable</li> <li>Identify the controlling i</li> <li>g and Learning Strategies</li> <li>Presentation of Powe</li> <li>Observing and follow reality and raising insect environmental factors to interrelationship.</li> <li>Direct delivery mether</li> <li>ucture</li> <li>Required Learning</li> </ul>	e environmental factored dearn about the conditions possibility of benefit nsects dearn about the Data should be environed and the laboratory and o determine the degree and and detailed explanation of the environed and the environed a	ors affecting ins ability of insecting iting from the of now screen ment of insects the d exposing them e of their influence nation Learning method Lecture, discuss and examinations	cts to adapt environment hrough field to various ce and study t Evaluation method

3	4	Memorization, understanding, pract application		Lecture, discuss and examinationsNs	Oral exam
4	4	Memorization, understanding, pract application	Biopotential factors insect	Lecture, discuss and examinationsNs	quiz
5	4	Memorization, understanding, pract application	Sexual factors in inse		Oral exam
6	4	Memorization, understanding, pract application		Lecture, discuss and examinationsNs	quiz
7	4	Memorization, understanding, pract application		Lecture, discuss and examinationsNs	Exam
8	4	Memorization, understanding, practica	Natural balance insects	Lecture, discuss and oral	quiz
9	4	Memorization, understanding, pract application	Abiotic fact (environmental resistance factors s as temperature humidity	examinationsNs Lecture, discuss and examinationsNs	Oral exam
10	4	Memorization, understanding, pract application	Wind, atmosph pressure, and moonli	examinationsNs Lecture, discuss and examinationsNs	quiz
11	4	Memorization, understanding, pract application	Food, competition biotic enemies insects	examinationsNs Lecture, discuss and examinationsNs	Oral exam
12	4	Memorization, understanding, pract application	Competition betw individuals of the sa species	examinationsNs Lecture, discuss and examinations	quiz
13	4	Memorization, understanding, pract application	Competition betw different species biological enem ies	examinationsNs Lecture, discuss and examinations	Oral exam

14	4	Memorization, understanding, pract application	Design use 1 progra	hem	-		examinationsNs Lecture, discuss and examinationsN	quiz
15	4	Memorization, understanding, pract application	exam				examinationsNs Lecture, discuss and examinationsN	Exam
11. Co	ourse Eva	luation						
A theor	etical mo	onthly exam of 30 marks	s, divide	ed into	o 25	marl	ks, a written exam	and 5 marks
distribu	ted betwe	een the daily and oral e	exams a	nd rej	ports	, and	a practical exam	n of 20 marks
divided	into 15 n	narks for the monthly exa	am and a	5 marl	ks di	stribı	uted as in the theor	retical exam.
12. Le	arning an	d Teaching Resources						
Require	d textboo	ks (curricular books, if a	ny)		В	ooks	available for free	
Main re	ferences	(sources)			-	Ecolo	ogy of Insects/Con	cepts and
Recomm	nended b	ooks and references (scie	entific			Jourr	nals / insect ecolog	у
journals	, reports.	)			- C(	Bı ompa	ulletins issued inies	by agricult
Electror	nic Refere	ences, Websites					Arab and internal websites published	
## **Course Description Form** 1. Course Name: sustainable development 2. Course Code: 3. Semester / Year: Chapter Two/Four 3. Description Preparation Date: 4. Available Attendance Forms: Actual presence 5. Number of Credit Hours (Total) / Number of Units (Total) 30 Hours units 2 6. Course administrator's name (mention all, if more than one name) Name: Email: 7. Course Objectives **Course Objectives** For the student to know the types of analytical methods • The student learns how to analysis water, soil and plant • The student should evaluate the scientific reality to maintain analytical methods 8. Teaching and Learning Strategies 1- Explanation and clarification Strategy 2- Lecture method 3- Student groups 4- Practical lessons 5- Scientific trips 6 - Self-learning method 9. **Course Structure** Week Hours Required Unit or Learning Evaluation method Learning subject name method Outcomes The first 2 Water, soil Explanation the exam The student gets plant analytica to know presentation introduction of the about water. soil model and plant analytical lecture

			1		
The second	2	is for the student to know analytical of water			
Third	2	The student learns about soil analytical	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Fourth	2	The student gets to know plant analytical	Water soil plant analytic	Explanation , presentation	the exam
Fifth	2	: The student learns about methods of soil samples	Water soil plant analytic	Explanation , presentation	the exam
Sixth	2	: The student learns about methods of plant samples	Water, soil and plant analytical	Explanation , presentation of the model and lecture	the exam
Seventh	2	: The student gets to know the methods of water samples methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Eighth	2	The student gets to know the quantitative and volumetric methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Ninth	2	The student gets	Water	Explanation	the exam

		to know the quantitative and weighing methods	soil plant analytic	, presentation of the model and lecture	
Tenth	2	: The student will learn about electrical of a Analytical methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Eleventh Twelfth	2	The student gets to know About analytical of spectroscopy The student gets to know Atomic emission methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam the exam
thirteenth	2	: The student knows how the Atomic absorption methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Fourteenth	2	: The student gets to know Metal analysis methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
Fifteenth	2	The student gets to know the types of X-ray analysis methods	Water soil plant analytic	Explanation , presentation of the model and lecture	the exam
10. Course Evaluation	on				
heoretical tests 40 - Practical tests - - Reports and studies - Final exam 50	s 10				
11. Learning and Te	aching Res	sources			
equired textbooks (c fain references (sour		ooks, if any)			
larm matamanaga (agair	CAC)				

journals, reports)	
Electronic References, Websites	Soil Science Society Of America Library Genesis

			urse Description Form		
	Course N	ame:			
Store pe		_			
2. (	Course Co	ode:			
	Semester	/ Year:			
First/fou					
		on Preparation Date:			
$27 \setminus 2 \setminus 2$		Attendance Forms:			
	The prese		) / Number of Units (Total)	1	
	60 hours/		) / Indinoci of Offics (Total)	•	
·	00 110013/	5 units			
7. (	Course ad	ministrator's name (m	nention all, if more than one	e name)	
	Name:				
]	Email:				
	Course O				
Course	Objectiv		types of pests that affect	0	
		•	thods of controlling stora nformation about storage		ograme
			must master how to conf		
			nods of combating them.	ront epidenne e	ases of stored
		-	to find solutions in the eve	ent that grains a	are infected w
		storage pests.		0	
9. 7	Teaching	and Learning Strategi	es		
Strateg	У				
			owerPoint via the Data sho		a of ontical and
		anatomical microsco	nose lesions that affect graines	ns through the us	se of optical and
			ethod and detailed explana	tion	
			tion of slides and illustrativ		
	ourse Stru				
Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning		method	method
	4	Outcomes	Common methods of	Lecture and	Written te
1	/1			LECIULE ALLU	
1	4	Memorize, understan		discussion	vv nitični te
			storing grains in Iraq	discussion Lecture and	
1	4	analysis	storing grains in Iraq Signs of damage to sto	discussion Lecture and discussion	
			storing grains in Iraq	Lecture and	Written te
2	4		storing grains in Iraq Signs of damage to sto grains due to their infect with types of wareho pests	Lecture and	Written te
			storing grains in Iraq Signs of damage to sto grains due to their infect with types of wareho pests Direct and indirect dam	Lecture and discussion	
2	4	analysis	storing grains in Iraq Signs of damage to sto grains due to their infect with types of wareho pests Direct and indirect dam to grains as a result of t	Lecture and discussion	Written te
2	4	analysis	storing grains in Iraq Signs of damage to sto grains due to their infect with types of wareho pests Direct and indirect dam to grains as a result of t infestation with wareho	Lecture and discussion	Written te
2	4	analysis	storing grains in Iraq Signs of damage to sto grains due to their infect with types of wareho pests Direct and indirect dam to grains as a result of t	Lecture and discussion	Written te

			grains in the field.			
4	4	analysis	Groups of insects of sto materials and their b divisions.	Lecture discussion	a	Written tes
5	4	Memorize, understa	Ecology and adaptation warehouse insects, and study of sc environmental factors their relationship warehouse insects.	Lecture discussion	a	Written tes
6	4	analysis	Nutritional preference grain insects and sto materials and its m important indicators in warehouse environment	Lecture discussion	a	Written tes
7	4	Memorize, understa	Methods of controll warehouse insects general	Lecture discussion	a	Written tes
8	4	analysis	Traditional methods their types, natural mechanical cont biological methods chemical methods us fumigants and t common types of cont mentioning their ic characteristics.	Lecture discussion	a	Written tes
9	4	Memorize, understa	Suitable conditions for growth of warehouse fu and the most import types of fu accompanying grains stored materials	Lecture discussion	a	Written tes
10	4	analysis	Damage caused by fung warehouses and the m important types mycotoxins common grain stores infected w the common types of fu that produce them. Ty of grain bacteria and sto materials prevalent in gr stores	Lecture discussion	а	Written tes
11	4	Memorize, understa	Mites of stored materia types, methods of detect the infestation of sto materials by mites, methods of con followed	Lecture discussion	a	Written tes
12	4	analysis	The most common types rodents in grain sto	Lecture discussion	а	Written tes

			damage and rats	caused by m			
13	4	Memorize, understa		1 methods used nice and rats	Lecture discussion	а	Written tes
14	4	analysis		st important ty ons used in cont mical means	Lecture discussion	а	Written tes
15	4	Memorize,understa	warehou importar importar agricultu their mo and the	nt types, t	Lecture discussion	а	Written tes
11.0		1					
	urse Eva						
		score out of 100 accord or al, monthly, or write write write or a state of the score of the scor			ed to the studer	nt su	ich as daily
		nd Teaching Resources					
		oks (curricular books,	if any)	Storage pests	ND. Iyad Ismai	l Al	-Jamal
Main ref	erences	(sources)					
Recomm journals,		ooks and references (s	scientific	All magazine	of Insects		
Electron	ic Refere	ences, Websites		Web. In	ternet		

		Cour	se Description Form		
Orchard	Course N				
	d insects				
2.	Course C	Code:			
3	Semester	·/Year			
second/		/ i cui.			
		on Preparation Date:			
20/2/20	-				
		e Attendance Forms:			
	The pres				
	-		Number of Units (Total)		
		3 Units			
	00 110 410				
7.	Course a	dministrator's name (me	ention all, if more than one name)	)	
	Name:				
	Email:				
8.	Course C	bjectives			
Course	e Objecti	ves 1-The student	learns about the most importar	nt insects that	at infect
		orchards			
		2-The student	learns about the most importar	nt insects that	at infect
		vegetables			
		3-The student	learned about the most importa	ant insects t	hat infect
		greenhouse pla	ints		
9.	Teaching	and Learning Strategies	6		
			5		
Strateg	3y		continuous weekly tests		
Strateg	3y	2-Exercises and activ	continuous weekly tests vities in the classroom		
Strateg	<b>3y</b>		continuous weekly tests vities in the classroom		
		2-Exercises and activ 3- Directing students	continuous weekly tests vities in the classroom		
	<b>3y</b> ourse Stru	2-Exercises and activ 3- Directing students	continuous weekly tests vities in the classroom		
		2-Exercises and activ 3- Directing students	continuous weekly tests vities in the classroom		
10. C	ourse Stru	2-Exercises and activ 3- Directing students	continuous weekly tests vities in the classroom s to some websites	Learning	Evaluation
10. C		2-Exercises and activ 3- Directing students acture Required Learning	continuous weekly tests vities in the classroom	Learning method	
10. Co Week	ourse Stru	2-Exercises and activ 3- Directing students acture Required Learning Outcomes	continuous weekly tests vities in the classroom s to some websites Unit or subject name	method	method
10. C	ourse Stru Hours	2-Exercises and activ 3- Directing students acture Required Learning Outcomes Memorization,	continuous weekly tests vities in the classroom s to some websites Unit or subject name The most important dam	method Lecture a	method
10. Co Week	ourse Stru Hours	2-Exercises and activ 3- Directing students acture Required Learning Outcomes Memorization, understanding,	continuous weekly tests vities in the classroom s to some websites Unit or subject name	method	method
10. Co Week 1	ourse Stru Hours 4	2-Exercises and activ 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis	continuous weekly tests vities in the classroom s to some websites Unit or subject name The most important dam caused by insects to plants	method Lecture a discussion	method Written tes
10. Co Week	ourse Stru Hours	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization,	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of   controll	method Lecture a discussion Lecture a	method Written tes
10. Co Week 1 2	ourse Stru Hours 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of   controll   agricultural pests	method Lecture a discussion Lecture a discussion	method Written tes Written tes
10. Co Week 1	ourse Stru Hours 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization,	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of   controll   agricultural pests   The concept of   econo	method Lecture a discussion Lecture a Lecture a	method Written tes Written tes
10. Co Week 1 2 3	ourse Stru Hours 4 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold	method Lecture a discussion Lecture a discussion Lecture a discussion	method Written tes Written tes Written tes
10. Co Week 1 2	ourse Stru Hours 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy Memorization,	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold   The most important pests t	method Lecture a discussion Lecture a discussion Lecture a	method Written tes Written tes Written tes Written tes
10. Co Week 1 2 3 4	ourse Stru Hours 4 4 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy	Continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold   The most important pests t   affect palm trees	method Lecture a discussion Lecture a discussion Lecture a discussion	method Written tes Written tes Written tes Written tes
10. Co Week 1 2 3	ourse Stru Hours 4 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization,	continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold   The most important pests t	method Lecture a discussion Lecture a discussion Lecture a discussion Lecture a	method Written tes Written tes Written tes Written tes
10. Co Week 1 2 3 4 5	ourse Stru Hours 4 4 4 4 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy	Continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold   The most important pests t   affect palm trees   Termite insect	method Lecture a discussion Lecture a discussion Lecture a discussion Lecture a discussion	method Written tes Written tes Written tes Written tes Written tes
10. Co Week 1 2 3 4	ourse Stru Hours 4 4 4 4	2-Exercises and active 3- Directing students acture Required Learning Outcomes Memorization, understanding, analysis Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization, understanding, analy Memorization,	Continuous weekly tests   vities in the classroom   s to some websites   Unit or subject name   The most important dam   caused by insects to plants   Methods of controll   agricultural pests   The concept of econo   Threshold   The most important pests t   affect palm trees	method Lecture a discussion Lecture a discussion Lecture a discussion Lecture a discussion	Written tes Written tes Written tes Written tes Written tes

		understanding, analy	grapes		discussion	
8	4	Memorization,	The r	The most important pests		Written test
		understanding, analy	citrus		discussion	
9	4	Memorization,	Pests o	f the cruciferous famil	Lecture a	Written test
		understanding, analy			discussion	
10	4	Memorization,	Pest	s of the legume family	Lecture a	Written test
		understanding, analy			discussion	
11	4	Memorization,	Pest	s of the Apiaceae famil	Lecture a	Written test
		understanding, analy			discussion	
12	4	Memorization,	Pest	s of the lily family	Lecture a	Written test
		understanding, analy			discussion	
13	4	Memorization,	Pests o	f olives and figs	Lecture a	Written test
		understanding, analy			discussion	
14	4	Memorization,	Narc	issistic family lesions	Lecture a	Written test
		understanding, analy			discussion	
15	4	Memorization,	Pom	egranate pests	Lecture a	Written test
		understanding, analy			discussion	
11. C	ourse Ev	aluation				
Distrib	uting the	score out of 100 accor	ding to t	he tasks assigned to th	ne student su	ich as daily
prepara	tion, dai	ly oral, monthly, or writt	en exams	s, reportsetc		
12. Le	earning a	nd Teaching Resources				
Require	ed textbo	oks (curricular books, if	any)	Orchard insects		
Main re	eferences	s (sources)		All magazines and periodicals that		
Recom	mended	books and references (sc	ientific	Dealing with	insects	
journal	s, reports	5)				
Electro	nic Refe	rences, Websites		Orchard insect	s\Dr. Iyad Is	mail
					-	

			(	Course Description Form		
1	. Cours	se Nar				
Crop	Insects					
2	. Cours	se Coo	le:			
3	. Seme	ster /	Year: 2024			
First	Semeste	er \ fo	urth			
4	. Descr	iptior	Preparation	n Date:		
2/2/2	2024					
5	. Avail	able A	Attendance F	Forms:		
			chedule			
6				rs (Total) / Number of Units (T	otal)	
			3 Units			
7			ninistrator's	name (mention all, if more than	n one name)	
	Name					
	Email	l:				
8	. Cours	e Ohi	ectives			
	rse Obje			rn about the concept of plant di	seases and ins	ect infectior
cou	ise obje			nods of diagnosing them		••••
				rn about ways to combat these	diseases and o	ther
				ral pests and methods of preve		
			A3-Lea	rn about the concept of integrat	ed manageme	nt to control
				t of agricultural pests		
				tify the nature of the damage a	nd losses in ag	ricultural
				on caused by these pests		
				tifying the reasons for the infe	station of field	s with these
				abiotic pathogens		at infact fie
				ribe the life cycle of pathogens tify the harmful source of infec		lat infect fie
Q	Teach	ning a	nd Learning			
Strat		iiig a		wing the concept of plant prote	ection especia	lly infectior
Stra	ugj			from biological causes	cetton, especia	iny intection
			-	bling students to diagnose infe	cted plants and	l the possibi
				ng and diagnosing the causativ		1
		B3	- The studen	t's ability to estimate the econe	omic critical li	mit
10	C	C 4				
10. <b>We</b>	Course Hours			Unit or subject name	Logrning	Evaluati
ek	nours		Required Learning	ome of subject name	Learning method	Evaluati on
CA			Outcomes		memou	method
1	2		Preserving	Preserving, understanding,	Preserving,	discussion
	theoret	ical	understand	analyzing, and applying the	understandi	oral exam
	and 2		g, analyzir		analyzing,	
	practica	al	and applyi		, lecture and	
			•	and their economic importan		
				Classes of the arthro		
	1			division, medical damage		
				its phenotypic characteristic		

2	2 theoretica 1 and 2	Preserving, understandi analyzing,	The most important insects w general damage or multi-fan insects:		oral exams
	practical	applying	1- The ground 2- Locusts		
			3- Carob The nature of damage		
			phenotypic characteristics the most important multi-fam insects		
3	2 theoretica 1 and 2 practical		The most important insects grain crops (insects of the Poaceae family, such as wh barley, corn, and rice) The nature of damage phenotypic characteristics the most important insects cereal crops (insects of Poaceae family such as wh and barley)	lecture discussion,	Quiz
4	2 theoretica		The most important insects o forage crops (insects of the	lecture discussion	Oral exam
	1 and 2 practical		legume family): The nature of damage		
			phenotypic characteristics the most important insects grain crops (insects of Poaceae family such as c and rice)		
5	2 theoreti and 2		The most important insects o industrial crops (sugar beet	lecture discussion	
	practical		insects) The nature of damage phenotypic characteristics of most important insects of for crops (insects of the legumin family such as jet and clover)		
6	2 theoreti and 2 practical		Theoretical test 1. Practical test 1.	lecture discussion	Exam
7	2 theoreti and 2 pra al		The most important insects o industrial crops (tobacco insects) The nature of the damage the most important phenoty characteristics of the m important insects of sugar be and tobacco	lecture discussion	Oral exam

8	2 theoreti		The most important insects o		Oral exam
	and 2 pra		industrial crops (safflower	discussion	
	а		insects)		
			The most important dama		
			and appearance characteris		
			of safflower insects		
9	2 theoreti		The most important insects o	lecture	Oral exam
	and 2 pra		industrial crops (sunflower	discussion	
	а		insects)		
			The most important dama		
			and phenotypic characteris		
			of sunflower insects		
10	2 theoreti		The most important insects of	lecture	Oral exam
	and 2 pra		industrial crops (cotton insec		
	a		1)		
			The most important dama		
			and phenotypic characteris		
			of cotton insects: 1		
11	2 theoreti		The most important insects of	lecture	
11	and 2 pra		industrial crops (cotton insec		
	and 2 pra		2)	uiscussion	
	a		The most important dama		
			and phenotypic characteris		
			of cotton insects2		
12	2 theoreti			la atuma	Oral exam
12			The most important pathoge	lecture	Orai exam
	and 2 pra		that infect field crops	discussion	
	а		The most important dama		
			and phenotypic characteris		
10			of acrosis	1	
13	2 theoreti		Applied control of econd		
	and 2 pra		insects 1 How to cond	discussion	
	а		applied control 1		
14	2 theoreti		Applied control of economic	lecture	Oral exam
	and 2		insects 2	discussion	
	practical		How to conduct applied con	andeassion	
	praetieur		2		
			2		
15	2 theoreti		Theoretical test 1.	lecture	exam
15	and 2		Practical test 1.	discussion	UNUIT
	practical		i iuciicui tost 1.	01500551011	
11 (	Course Eval	uation			
			30 marks, divided into 25 mar	rke a writton	avam and 5
			daily and oral exams and repo	-	
			arks for the monthly exam and	5 marks distri	iouted as in
	eoretical exa		00011#200		
		d Teaching R		Irred V	af and D
H A(1111	πεα τεχτρος	oks (curricula	r books Haj Ismail,	Iyad Youss	ef and Ba

any)	Rakan Dabdoub (2009). Insects of fi
	crops, the theoretical part.
Main references (sources)	1- Al-Azzawi, Abdullah Falih, Ibrahim
	Qaddouri Qaddo, and Haider Saleh Al-
	Haidari (1990) Economic Insects. Dar A
	Hekma Printing and Publishing Press.
	2- Jarjis, Salem Jamil, Hamza Kazem
	Abis, and Muhammad Abdel Karim
	Muhammad (2000) Insects of field crop
	Dar Al-Kutub for Printing and Publishi
	University of Mosul.
	3- Al-Hajj Ismail, Iyad Youssef,
	Banan Rakan Dabdoub (2009). Field c
	insects, the theoretical part.
Recommended books and references	Bailey, P. T. 2007. Pests of Field Cr
(scientific journals, reports)	and Pastures. Csiro Publishing, pp. 520.
Electronic References, Websites	Field crop insect pest from North Dakota
	State University.
	http://www.ext.nodak.edu/expubs/bugcrops.h
	tm.
	- Agricultural crop pest IPM at University of
	California.
	http://www.ipm.ucdavis.edu/PMG/crops-
	agriculture.html.
	- Key to insect and allied pest of field pest,
	Agriculture Western Australia.
	http://www.agric.wa.gov.au/

## **Course Description Form**

Course Description Form							
1. Course Name:							
Vegetables diseases	Vegetables diseases						
2. Course Code:							
3. Semester / Yea	2 Somester / Voor						
First semester / fourth							
4. Description Pr	•						
2024/02/14							
5. Available Atte	ndanca Forma						
Presence	iluance Poinis.						
	dit Uoura (Tota	al) / Number of Units	(Total)				
			(10tal)				
60 hours (30 theoretic			han and name				
	strator's name ()	mention all, if more t	nan one name,				
Name:							
Email:							
8. Course Object		4 4 1 4 4	•	· 1· .1 .			
Course Objectives	0	the student to the va	• 1				
	-	(fungal, bacteria	l, viral, nei	matode, and			
	physiological)		6.4 1				
		ne economic importat					
		ious environmental		eir impact on			
	-	nfectious plant disea					
	0	symptoms caused by					
	-	best ways to comba		-			
	· · · ·	plied, mechanical,	•	0			
9. Teaching and		emical, genetic, integ		nograms)			
	A- Cognitive						
Strategy		gets to know the dise	ases that affec	t plants and			
	their names.	gets to know the disc		t plants and			
		d out how nathogens	are transmitte	d from one			
	* To try to find out how pathogens are transmitted from one field to another or how the pathogen spreads through the same						
field.							
		must master how to	prevent and co	ntrol the			
	occurrence of	-					
* To be able to find solutions in cases of rapidly spreading							
epidemic diseases and ways to control them.							
* Learn about modern methods of disease diagnosis and							
control.							
* The student must master how to disseminate the information							
obtained in disease control.							
B - The skills objectives of the course.							
* The student must master how to diagnose these diseases.							
* The student will be able to treat diseases that affect plants							
* To be proficient in using disease control machines.							
* To be proficient in using modern and advanced methods of							
pest control.							
10. Course Structure							
Week Hours Requ	ired	Unit or subject	Learning	Evaluation			
		-	-				

		Learning Outcomes	name	method	method
1					
1		Memorization,	Nursery diseases		
4	understanding,		Lecture and	Oral exam	
	-	practical		discussion	
		application			
2		Memorization,	Diseases of the		
	4	understanding,	Solanaceae family	Lecture and	Quick exam
	4	practical		discussion	Quick exam
		application			
3		Memorization,	Eggplant diseases		
C		understanding,		Lecture and	
	4	practical		discussion	Oral exams
		application			
4	4	Memorization,	Tomato diseases		
4	т	understanding,	Tomato discuses	Lecture and	
		practical		discussion	Quick exam
		-		uiscussion	
~	4	application	Potato diseases		
5	4	Memorization,	Potato diseases	T a standard and	
		understanding,		Lecture and	Oral exams
		practical		discussion	
		application			
6	4	Memorization,	Diseases of the		
		understanding,	cucurbit	Lecture and	Quick exam
		practical		discussion	Quick exam
		application			
7	4	Memorization,	Diseases of the		
		understanding,	cruciferous	Writton avon	Witten aver
		practical		Written exam	written exar
		application			
8	4	Memorization,	Diseases of the		
0	-	understanding,	Compistae	Lecture and	
		practical	compistue	discussion	Oral exams
		-		discussion	
9	4	application Memorization,	Diseases of the		
7	4			T and 1	
		understanding,	legume	Lecture and	Quick exam
		practical		discussion	
10	4	application			
10	4	Memorization,	Diseases of the		
		understanding,	legumes	Lecture and	Oral exams
		practical		discussion	
		application			
11	4	Memorization,	Diseases of the lily		
		understanding,		Lecture and	Quick exam
		practical		discussion	VUICK CAAL
		application			
12	4	Memorization,	Diseases of the		1
		understanding,	Malviacea	Lecture and	
		practical		discussion	Oral exams
		application			
	4	Memorization,	Compound	Lecture and	Quick exam

		understanding,		diseases	discussion	
		practical				
		application				
14	4	Memorization,	Stor	age diseases		
		understanding,			Lecture and	Oral exams
		practical			discussion	Orar exams
		application				
15	4	Memorization,	Mo	nthly Exam		
		understanding,			Written exam	Writton oxom
		practical			w milen exam	withten exam
		application				
11. Course Evaluation						
- Theoretical tests: (daily exams - monthly exams - oral exams)						
- Practical tests: (daily exams - monthly exams - oral exams)						
	- Theoretical and practical reports					
	- Models for examination and practical experiments					
12. Learning and Teaching Resources						
Required textbooks (curricular books, if an 1. Orchard and vegetables diseases /					diseases / Dr.	
			Samer Michael			
Main references (sources)			- Iraqi Agriculture Journal			
		- Journals dealing with diseases of all				
		field crops				
		- Bulletins issued by agricultural				
			companies and pesticide companies			
Recommended books and references			- All agricultural sites and crop disease			
(scientific journals, reports)			journals			
Electronic References, Websites			- World Wide Web			