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

Academic Program and Course Description

2024-2025

the introduction:

The educational program is a coordinated and organized package of courses that include procedures and experiences organized in the form of study vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures .and programs, such as the external examiner program

The academic program description provides a brief summary of the main features of the program and its courses, indicating the skills that students are working to acquire based on the objectives of the academic program. The importance of this description is evident because it represents the cornerstone in obtaining program accreditation, and the teaching staff participates in writing it under the supervision .of the scientific committees in the scientific departments

This guide, in its second version, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the developments and changes in the educational system in Iraq, which ,included a description of the academic program in its traditional form (annual semester) in addition to adopting the description of the academic program circulated pursuant to the letter of the Department of Studies TM3/2906 dated regarding programs that adopt the Bologna process as a basis for their 2023/3/5 .work

In this regard, we cannot but emphasize the importance of writing a description of academic programs and courses to ensure the smooth running of the educational .process

Concepts and terms

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

Course Description: Provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It .is derived from the programme description

Program Vision: An ambitious picture of the future of the academic program to be .an advanced, inspiring, motivating, realistic and applicable program

Program mission: It briefly explains the objectives and activities required to achieve them, and it also identifies the program's development paths and .directions

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

Curriculum structure: All courses/subjects included in the academic program according to the approved learning system (semester, year, Bologna track) whether they are required (ministry, university, college and scientific department) .with the number of academic units

Learning outcomes: A consistent set of knowledge, skills and values acquired by the student after successfully completing the academic program. The learning outcomes for each course must be determined in a way that achieves the .program's objectives

Teaching and learning strategies : These are the strategies used by the faculty member to develop the student's teaching and learning. They are plans that are

Academic program description form for colleges and institutes

For the year 2024 / 2025

University: Al-Furat Al-Awsat Technical University
College/Institute: Al-Musayyib Technical
Scientific Section: Plant Production Techniques
File filling date:

Signature:
Head of Department Name:
Dr. Marwan Zuhair Rajab.
Date : 16/4/2025

Signature:
Scientific Associate Name:
Dr. Muhammad Hadi Sabry
Date : 20/4/2025

The file is checked by : Department of Quality Assurance and University Performance Director of the Director of the Quality Assurance and University Performance Department: A.L. Walaa Hussein AlIawi
Date: 17/04/2025
Signature:

Approval of the Dean
Dr. Malik Naama Hawas
21.4.2025

followed to achieve learning objectives. That is, they describe all classroom .andextracurricular activities to achieve the learning outcomes of the program

1. **Program vision**
Expanding the base of education and its modern applications in the field of agriculture, a close relationship with various work sectors, and activating the role of scientific research in various .development fields

2. **Program message**
The department adopts the dissemination of scientific and technical knowledge in the field of agricultural technologies to graduate national cadres at the educational level capable of absorbing modern technologies and supporting the scientific and technical development process to keep pace :with global technologies and to fulfill the following 1. Openness to society in the field of agriculture and activating relations with the private sector .in scientific consultations, training and technical qualification 2. Developing future plans to develop educational and training curricula and graduate technical .cadres in the field of agricultural pest control 3. Focus on scientific research among academics in the department and the staff to develop .plans to overcome problems in the fields in the field and in practice 4. .Use of computer and Internet technologies in education and training

3. **Program objectives**
The department aims to prepare technical staff who are familiar with the technical knowledge in the ,fields of plant breeding and improvement, tissue culture propagation, field crop production greenhouse construction and cultivation with various crops, shade building, nursery production, fruit tree and ornamental plant propagation, garden design and engineering, disease, fungal, insect and weed control, beehive construction, beekeeping, honey production, agricultural field management and .provision of their requirements :Graduate job description :The graduate of this major is qualified to perform the following tasks 1. Working in the field of plant tissue culture in the laboratory

2. Working in the field of plant breeding and improvement in agricultural fields
3. Working in the field of midwife production and propagation of fruit trees, forests and ornamental plants
4. Working in the field of protected agriculture in greenhouses, plastic houses and tunnels
5. Working in the field of designing and engineering gardens and planting them with various plants
6. Working in the field of beekeeping, apiary management and honey production
7. Work in the field of field crop production and marketing
8. Work in the field of plant protection and agricultural pest control
9. Working in the field of agricultural field management and cost and profit calculation
10. .Management of grain silo laboratories, testing the purity of seeds and how to grade them

4. **Program accreditation**
nothing

5. **Other external influences**
nothing

6. **Program Structure**

* comments	percentage	Study unit	Number of courses	Program Structure
	%100	130	30	Institutional Requirements
	%100	130	30	College Requirements
	%100	130	30	Department Requirements
	Completed	Completed	1	Summer training
				Other

.Notes may include whether the course is basic or optional *

7. Program Description				
Credit hours		Course name	Course code	Year/Level
practical	theoretical			First academic year Autumn semester
3	2	Winter field crops		
3	2	Winter vegetable crops		
3	1	Forests		
2	1	Plant protection		
3	1	General soil		
2	2	Agricultural tractors and equipment		
2	1	Animal production		
3	2	Perennial fruit production		
2	1	Calculator applications		
	2	Democracy and human rights		
	2	English language		
3	2	Summer field crops		Spring semester
3	2	Summer vegetable crops		
3	2	Perennial fruit production		
3	1	Nurseries		
3	1	General insects		
3	1	Statistics and planning experiments		
2	1	Farm management		
2	1	Calculator applications		
3	2	Protected agriculture		Second academic year, fall semester
2	2	Plant breeding		
3	1	Tissue culture		
2	2	Seed production		
3	2	Deciduous fruit production		
3	1	Irrigation and salt		

2	2	Plant diseases		
2		Graduation research project		
2	1	Calculator applications		
3	2	Protected agriculture		
	2	English language		
	1	Baath Party Crimes		
3	2	Summer field crops		Spring semester
3	2	Summer vegetable crops		
3	1	Nurseries		
3	1	General insects		
3	1	Statistics and planning experiments		
2	1	Farm management		
2	1	Calculator applications		

8. Expected learning outcomes of the program	
know I don't	
	Building and constructing greenhouses and plastic tunnels, planting various -1 .vegetable plants, and producing ornamental and nursery plants . Breeding and improving plant varieties, producing hybrids and preserving breeds - 2
Skills	
	,Cultivation of fields with horticultural crops and other crops, production of seedlings - .storage and preservation of fruits .Adopting biological, organic and mechanical control to eliminate diseases and fungi - Design and installation of sprinkler and drip irrigation systems in greenhouses and - .agricultural fields
Values	
	Oral tests, daily tests, monthly written tests, semester exams, final exams

9. Teaching and learning strategies
Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific) (visits, systematic field training, summer training

10. Evaluation methods
(Oral tests, daily tests, monthly written tests, semester exams, final exams).

11. Faculty						
Faculty members						
Faculty preparation		Special requirements/skills (if any)		Specialization		Academic Rank
lecturer	angel			private	general	
	2			Plant diseases	Bio- resistance	.Mr
	1			Plant propagation and improvement	Plant production techniques	assistant professor
	2			Plant propagation and improvement	Plant production techniques	Teacher
	3			Plant propagation and improvement decoration + and landscaping	Plant production techniques	Assistant Professor

Professional development
Orientation of new faculty members
1- .Commitment to the work schedule and tasks assigned to them 2- Teaching and the ability to deliver information to the student efficiently 3- Preparing teaching materials 4- Teamwork
Professional development for faculty members
1- Research activity 2- . Participation in specialized conferences and seminars 3- .Participation in scientific and practical activities 4- Contributing to scientific and research development 5- .Active participation in the committees assigned to it in the department and the institute

12. **Acceptance Criteria**
Central acceptance

13. **The most important sources of information about the program**
1- Scientific methodological books **2- Scientific research and studies** **3- The Internet** 4- **Scientific journals**

14. Program development plan
1- Holding educational programs through educational supervision committees to guide students during their years of study **2- Holding workshops to train faculty members**

3- **Reviewing programs and courses and working on developing them according to the requirements of the labor market and the development of modern science and technology .**

Program Skills Chart															
Required learning outcomes of the program															
Values				Skills				knowledge				Essential or ?optional	Course name	Course code	Year/Level
A4	A3	A2	A1	B4	B3	B2	B1	A4	A3	A2	A1				
											•	essential	Winter field crops		First academic year Autumn semester
						•					•	essential	Winter vegetable crops		
					•						•	essential	Forests		
				•							•	essential	Plant protection		
			•								•	essential	General soil		
		•									•	essential	Agricultural tractors and equipment		
		•									•	essential	Animal production		
										•		essential	democracy		

		•									•	essential	Calculator applications		
					•							essential	English language		
		•			•							essential	Summer field crops		Spring semester
		•				•					•	essential	Summer vegetable crops		
		•				•					•	essential	Perennial fruit production		
											•	essential	Nurseries		
											•	essential	General insects		
											•	essential	Statistics and planning experiments		
											•	essential	Farm management		
											•	essential	Calculator applications		
											•	essential	Protected agriculture		Second ,academic year fall semester
		•				•				•		essential	Plant breeding		

		•						•		•		essential	Tissue culture		
		•				•				•		essential	Seed production		
										•		essential	Deciduous fruit production		
	•				•					•		essential	Irrigation and salt		
		•						•		•		essential	Plant diseases		
								•				essential	Baath crimes		
										•		essential	Graduation research project		
		•						•			•		Calculator applications		
		•					•				•		Protected agriculture		
						•							English language		
		•					•				•		Summer field crops		Spring semester
		•					•				•		Summer vegetable crops		
			•					•			•		Perennial fruit production		

			•					•			•		**Nurseries**		
			•					•			•		**General insects**		
		•					•				•		**Statistics and planning experiments**		
		•					•				•		**Farm management**		
		•					•			•			**Calculator applications**		

- **.Please tick the boxes corresponding to the individual learning outcomes of the programme being assessed**

Course Description Form

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of . the learning opportunities available. It must be linked to the programme description

Al-Musayyab Technical Institute	**1. Educational institution**
Department of Plant Production Technologies	**2. Scientific Department / Center**
Protected cultivation	**3. Course Name/Code**
The lecture	**4. Available attendance forms**
quarterly	**5. Chapter/Year**
75 hour	**6. Number of study hours (total)**
2024/28/2	**Date of preparation of this .7 description**
D. Oras Mohsen Kazem	**Name of the course administrator .8**
Course Objectives .8	
1- .The student will be able to know the basics of establishing and building greenhouses	
2- .The student will be able to prepare and set up houses for agriculture	
3- The student will have the ability to produce seedlings and seedlings and plant them in .greenhouses	
4- The student will have full knowledge of the processes of breeding, pruning and control of .cultivated plants	
5- The student will have the ability to manage the agricultural project and calculate the cost of .production and marketing	

Teaching, learning and assessment strategies
A- Cognitive objectives A1- Protected agriculture
. B - Course specific skill objectives B1 - Establishing and building greenhouses and plastic tunnels B2 - Preparing and equipping houses for agriculture B3 - Production of nurseries and seedlings and planting them in greenhouses B4- Agricultural project management and production and marketing cost calculation
Teaching and learning methods
(Lecture, laboratory, methodical training, summer training)
Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment)
C- Emotional and value-based goals .A1- Establishing greenhouses is the main pillar of protected agriculture .A2- Growing vegetable crops out of season, such as growing summer vegetables in winter in greenhouses .A3- Providing suitable environmental conditions for plant growth by operating heating and cooling devices ,A4- Introducing hydroponic farming programs in greenhouses and producing strawberries, mushrooms .ornamental plants and fruits
Teaching and learning methods
,Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits) (systematic field training, summer training

Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment)
.transferable skills (other skills related to employability and personal development) .D1- Introducing organic farming programs and organic production of plants grown in greenhouses .D2- Optimal utilization of protected agriculture by following the summer agriculture system in greenhouses D3- Growing leafy vegetables and legumes in greenhouses D4- Production of nurseries for green plants and propagation of tree seedlings and ornamental plants

10. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Written exam	The lecture	Production in protected environment	The student will be able to identify the importance of production in the protected .environment	5=3+2 hours	1
Written exam	The lecture	Design and construction of greenhouses	The student will be able to understand the design of .greenhouses	=	2
Written exam	The lecture	Design of basins and tunnels	The student will be able to understand the design of .basins and tunnels	=	3
Written exam	The lecture	Providing environmental conditions	The student will be able to identify the provision of .environmental conditions	=	4
Written exam	The lecture	Methods of controlling electronic devices heating and cooling	The student will be able to identify electronic heating .and cooling devices	=	5
Written exam	The lecture	Vegetable seedling production	The student will be able to know the production of .vegetable seedlings	=	6
Practical evaluation	is The lecture .practical	Ornamental seedlings production	The student will be able to know the production of .ornamental seedlings	=	7
Practical evaluation	is The lecture .practical	Growing some plants of the nightshade family	The student will be able to learn how to grow some plants of the nightshade .family	=	8
Practical evaluation	is The lecture .practical	Growing some plants of the cucurbitaceae family	The student will be able to learn about the cultivation of some plants of the .cucurbitaceae family	=	9
Practical evaluation	is The lecture .practical	Summer farming system	The student will be able to know the summer farming .system	=	10
Practical evaluation	is The lecture .practical	Mushroom cultivation of all kinds	The student will be able to know the types of .mushroom cultivation	=	11
Practical evaluation	is The lecture .practical	Strawberry Planting	The student will be able to learn how to grow .strawberry plants	=	12

Practical evaluation	is The lecture .practical	Hydroponic system	The student will be able to .know the hydroponic system	=	13
Written exam	The lecture	Organic farming system	The student will be able to know the organic farming .system	=	14
Written exam	The lecture	Intercropping and vertical farming system	The student will be able to know the intercropping and .vertical farming system	=	15

11. The structure of the decision	
Required textbooks -1	,Protected Agriculture Methodological Book Course Educational Kit
Main references (sources) -2	Textbooks taught in corresponding colleges and universities
) A- Recommended books and references (.scientific journals, reports, etc	Foreign and Arabic references on protected agriculture
...B - Electronic references, websites	Searching websites in agricultural sciences

12. Course Evaluation

By distributing the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .13

Curriculum books, if any	√
Main References..Sources	√
Supporting books and references .recommended by scientific journals. Reports	
Electronic references websites	√

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the .learning opportunities available and must be linked to the program class

Al-Musayyab Technical Institute	**7. Educational institution**
Department of Plant Production Technologies	**Scientific Department / Center**
Tissue Culture& Plant Cells	**Course Name/Code**
The lecture	**Available attendance forms**
Fall Semester / Second Stage	**Chapter/Year**
60 In the theoretical and practical chapter	**Number of study hours (total)**
2024/2/	**Date this description was prepared**
Course Objectives .8	
Granting the student a diploma in the theoretical and practical aspects, which serves to prepare a graduate with a prestigious level and a place in the workplace	
Course name: Intisar Abdullah Toman	

Teaching, learning and assessment strategies
A- Cognitive objectives
.A1- Teaching students the importance of plant tissue culture
.Introducing students to the role of growth regulators in cell division and differentiation in tissue culture -2
.Enabling the student to know how to deal with laboratory materials and equipment -3

. B - Course specific skill objectives .B1 - Providing the student with the skills of tissue culture propagation of plants Training the student on manufacturing agricultural media and tissue culture propagation of plants to -2 .achieve high productivity Providing the student with the necessary skills to conduct laboratory tests related to tissue culture and -3 .how to give appropriate scientific judgments
Teaching and learning methods
Giving scientific and theoretical lectures through display screens, PowerPoint, slides, microscopes, and experiments examining plant samples, using various laboratory devices and equipment, and a wooden .canopy
Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment)
C- Emotional and value-based goals .A1- Enabling the student to apply theoretical information in a practical way .Developing the national spirit among students to increase production in terms of quantity and quality -2 ,Instilling the concept of community service and the best way to deal with the simple segments of society -3 .farmers and peasants Developing the ethics of the agricultural engineering profession among students by following the correct -4 .professional behavior
Teaching and learning methods
,Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits) (systematic field training, summer training

Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment)
.transferable skills (other skills related to employability and personal development) **D1- Entering programs**

13. Course structure					
Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Written exam	The lecture And a practical lesson	Common terms in the subject of plant cell and tissue culture - apical meristem - callus - cell solution - nutrient medium - protoplast - cell differentiation - cell fusion - anther culture - cell preservation by freezing	Cognitive And my skills	4=3+1 hours	1
Written exam	The lecture	The importance of plant cell and tissue culture in increasing agricultural production	Cognitive And my skills	=	2
Written exam	The lecture	The role of growth regulators in cell division and differentiation	Cognitive And my skills	=	3
Written exam	The lecture	The importance of tissue culture in plant breeding and improvement (1)	Cognitive And my skills	=	4
Written exam	The lecture	The importance of tissue culture in plant breeding and improvement (2)	Cognitive And my skills	=	5
Written exam	The lecture	The importance of tissue culture in the production of medical drugs (1)	Cognitive And my skills	=	6
Practical evaluation	The is lecture .practical	The importance of tissue culture in the production of medical drugs (2)	Cognitive And my skills	=	7
Practical evaluation	The is lecture .practical	Tissue culture of roots	Cognitive And my skills	=	8
Practical evaluation	The is lecture .practical	Callus cultivation and production	Cognitive And my skills	=	9
Practical evaluation	The is lecture .practical	Production and growth of cell suspension	Cognitive And my skills	=	10

Practical evaluation	The is lecture .practical	Preservation of plant tissues by freezing	Cognitive And my skills	=	11
Listening and asking questions	The is lecture .practical	Production of virus-free plants	Cognitive And my skills	=	12
Practical evaluation	The is lecture .practical	Use of root-knot bacteria in tissue culture	Cognitive And my skills	=	13
Written exam	The lecture	Growth measurements of transplanted organs and tissues	Cognitive And my skills	=	14
Practical evaluation	The lecture practical	Preparing agricultural environments	Cognitive And my skills	=	15

14. The structure of the decision	
Protected Agriculture Methodological Book, Course Educational Kit	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on tissue culture	) A- Recommended books and references (.scientific journals, reports, etc
Searching websites in agricultural sciences	...B - Electronic references, websites

15. Course Evaluation	
By distributing the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly and written exams, reports, etc	
Learning and teaching resources .13	
	Curriculum books, if any
	Main References..Sources

	Supporting books and references .recommended by scientific journals. Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the .learning opportunities available. It must be linked to the programme description

Al-Musayyab Technical Institute	1- Educational institution
Department of Plant Production Technologies	2- Scientific Department / Center
Winter vegetable crops /Winter vegetable crops	3- Course Name/Code
My presence	4- Available attendance forms
Fall Semester - First Stage	5- Chapter/Year
hours in theoretical and practical 75 classes	6- Number of study hours (total)
2024/28/2	Date of preparation of this description .7
Course Objectives .8	
Granting the student a diploma in the theoretical and practical aspects, which serves to .prepare a graduate with a prestigious level and introduce him to the practical arena	
Course name	
Dr. Marwa Hassan Jarallah	

Teaching, learning and assessment strategies -9

A- Cognitive objectives

A1- Teaching students how to deal with winter vegetable crops so that they have modern scientific .specifications, methods of managing them, and the factors affecting their productivity

A2- Introducing students to how to develop winter vegetable crops so that they become able to describe and . serve them in their various types

. A3- Enabling the student to know how to deal with laboratory materials and equipment

. B - Course specific skill objectives

B1 - Providing the student with skills to apply scientific methods regarding the management of winter .vegetable crops

. B2- Training the student to produce winter vegetable crops to achieve high productivity

B3- Providing the student with the necessary skills to conduct laboratory tests related to vegetables and soil .and how to give appropriate scientific judgments

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

.A2- Developing the national spirit among students to increase production in terms of quantity and quality

,A3- Instilling the concept of community service and the best way to deal with simple segments of society .such as farmers and peasants

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

Teaching and learning methods -10

(Lecture, laboratory, methodical training, summer training)

Giving theoretical and practical lectures through display screens, PowerPoint, slides, microscopes, plant sample examination experiments, and using various laboratory devices and equipment and a wooden .canopy

Evaluation methods -11

(Oral exams, written exams, semester exams, final exams, daily assessment)

- **Conducting daily quick testsQuize**
- **.Conducting monthly exams**
- **.Conducting midterm and final exams**

12- Course structure					
Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Questions and Answers	Lecture and practical lesson	Vegetable science Economic and nutritional importance	My knowledge and skills	5=3+2 hours	1
Written exam	Lecture and practical lesson	Geographical distribution in Iraq and the Arab world vegetable production - problems and proposed solutions	My knowledge and skills	5=3+2 hours	
Asking questions	Lecture and practical lesson	Methods of dividing vegetables - Botanical division - According to the growth cycle - According to the part used for consumption - Thermal division - Division according to the method of cultivation - Areas of origin of vegetables	My knowledge and skills	5=3+2 hours	2
Listening and asking questions	Lecture and practical lesson	The effect of environmental factors on the growth and - development of vegetables climate factors - soil factors	My knowledge and skills	5=3+2 hours	3
Practical ,exercise presentation and group work	Lecture and practical lesson	Vegetable crops reproduction - sexual reproduction - asexual reproduction - good seed - characteristics - germination - dormancy seed treatments	My knowledge and skills	5=3+2 hours	4
Practical ,exercise presentation and group work	Lecture and practical lesson	Vegetable seedling production - definition of nursery - advantages and - disadvantages of nursery Reasons for variation in seedling tolerance - Agricultural environments Definition of - acclimatization Physiological changes of acclimatization	My knowledge and skills	5=3+2 hours	5
Mini-lesson Discussion Practical	Lecture and	Production of the cabbage crop - the original homeland and importance	My knowledge and skills	5=3+2 hours	6

exercise and working groups	practical lesson	of cabbage - suitable - climate and soil reproduction - planting date and method - service process			
,Case study practical exercises and work groups	Lecture and practical lesson	- Cauliflower production original habitat and - importance of cauliflower - suitable climate and soil reproduction - planting date and method - service process	My knowledge and skills	5=3+2 hours	7
Listening and giving ,questions practical exercises and work groups	Lecture and practical lesson	,Production of radish turnip, and garden cress crops - location and - importance of the crop - suitable climate and soil reproduction - planting date and method - service process	My knowledge and skills	5=3+2 hours	8
Listening ,questions practical exercises and group work	Lecture and practical lesson	- Production of fava beans peas - fenugreek - original home and importance of the crop - suitable climate and - soil - reproduction - planting date and method service process	My knowledge and skills	5=3+2 hours	9
Group work questions	Lecture and practical lesson	- Onion crop production original habitat and - importance of the crop - suitable climate and soil reproduction - planting date and method - service process - early flowering in onions - doubling in onions green onion production -	My knowledge and skills	5=3+2 hours	10
Mini-lesson work groups	Lecture and practical lesson	Production of garlic and leek crops - original habitat and importance of the crop - suitable climate and soil - reproduction - planting date and method - service process	My knowledge and skills	5=3+2 hours	11
Practical exercise and work groups	Lecture and practical lesson	- Production of Swiss chard beetroot - spinach - original habitat and importance of the crop - suitable climate - and soil - reproduction - planting date and method service process - flowers	My knowledge and skills	5=3+2 hours	12

Asking questions	Lecture and practical lesson	Production of carrot and lettuce crops - original habitat and importance of the crop - suitable climate - and soil - reproduction - planting date and method service process - flowering in lettuce	My knowledge and skills	5=3+2 hours	13
Practical exercise questions	Lecture and practical lesson	- Production of celery parsley - dill - original habitat and importance of the crop - suitable climate - and soil - reproduction - planting date and method service process	My knowledge and skills	5=3+2 hours	14
Practical exercise questions	Lecture and practical lesson	Production of vegetables expected to be cultivated in Iraq: Broccoli - Brussels - sprouts - Watercress - Endive - Onions - Chef Importance and original home - Planting Date and Method - Service Operations	My knowledge and skills	5=3+2 hours	15

Curriculum development plan -13
.Providing the possibility of academic support in organizing field visits - Providing an appropriate classroom environment that enables the teacher to diversify - .teaching strategies Providing information technology in the campus library - Hosting experts from outside the institute or from the work environment for which they - are preparing to benefit from their expertise in developing the course according to the .actual need of the labor market

Infrastructure -14	
Winter Vegetable Crops Textbook	Required textbooks -1
Supporting resources for each course	Main references (sources) -2

Scientific journals, as well as research, theses and dissertations of professors in the same .specialization	A- Recommended books and ,references (scientific journals (.reports, etc
www.google.com website	...B - Electronic references, websites

Course Evaluation -15

By distributing the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .16

	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals. Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the .learning opportunities available. It must be linked to the programme description

Al-Musayyab Technical Institute	7- Educational institution
Department of Plant Production Technologies	8- / Scientific Department Center
Nurseries and forests /Nurseries and Forestries	9- Course Name/Code
My presence	10- Available attendance forms
Fall Semester - First Stage	11- Chapter/Year

hours in theoretical and practical classes 60	12- Number of study hours (total)
2024/28/2	Date of preparation of this .7 description
Course Objectives .8	
Granting the student a diploma in the theoretical and practical aspects, which serves to prepare a .graduate with a prestigious level and introduce him to the practical arena	
Course name	
Dr. Marwa Hassan Jarallah	

Teaching, learning and assessment strategies -9
A- Cognitive objectives A1- Teaching students how to deal with nurseries and forests so that they meet modern scientific .specifications, management methods, and factors affecting their productivity A2- Introducing students to how to develop nurseries and forests so that they become able to describe and . serve them in their various types . A3- Enabling the student to know how to deal with laboratory materials and equipment
. B - Course specific skill objectives B1 - Providing the student with skills to apply scientific methods regarding the management of winter .vegetable crops . B2- Training the student to produce winter vegetable crops to achieve high productivity B3- Providing the student with the necessary skills to conduct laboratory tests related to vegetables and soil .and how to give appropriate scientific judgments C- Emotional and value-based goals A1- The student acquires skills in applying scientific methods, especially those related to nursery and forest .management, so that he becomes able to propagate them using modern methods, such as plant tissue culture .A2- Training the student on nursery and forest production to achieve high productivity

A3- Providing the student with the necessary skills to conduct laboratory tests related to nurseries, forests .and soil, and how to give appropriate scientific judgments
Teaching and learning methods -10
Giving theoretical and practical lectures through display screens, PowerPoint, slides, microscopes, plant sample examination experiments, and using various laboratory devices and equipment and a wooden .canopy
Evaluation methods -11
-) Conducting daily quick testsQuize .(**- .Conducting monthly exams** **- .Conducting midterm and final exams**

13- Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	The week Watches	
Questions and Answers	Lecture and practical lesson	Nurseries - Importance of - nurseries - Types of nurseries Test	My knowledge and skills	4=3+1 hours	1
Questions and answers practical lesson	Lecture and practical lesson	Nursery site - preparation and planning - some definitions such ,as seedlings, trees, shrubs forests and forest cultivation	My knowledge and skills	4=3+1 hours	
Asking questions	Lecture and practical lesson	Plant Propagation - Sexual and - Asexual Reproduction Advantages and Disadvantages of Both Methods	My knowledge and skills	4=3+1 hours	2
Listening and asking questions	Lecture and practical lesson	- Propagation by seeds germination requirements - seed viability - environmental and internal factors - methods of planting seeds - methods of - planting in a permanent place agricultural media	My knowledge and skills	4=3+1 hours	3
Practical ,exercise	Lecture and	Vegetative propagation methods - Propagation by cuttings - Types of cuttings - Types of stem cuttings - Origin of culms	My knowledge and skills	4=3+1 hours	4

presentation and group work	practical lesson	in hardwood cuttings - Factors affecting root formation			
Practical ,exercise presentation and group work	Lecture and practical lesson	Auxins – Types of Auxins Methods ofAuxins used in stem – cuttingsKayering Types of - layers - Types of Earth layers Air layers - Light - Forms of light - Transporters - Plants and transport mechanisms.	My knowledge and skills	4=3+1 hours	5
Mini-lesson Discussion Practical exercise and working groups	Lecture and practical lesson	Training - Skill and training - objective - Parts of the plant .Framework - Training methods	My knowledge and skills	4=3+1 hours	6
,Case study practical exercises and work groups	Lecture and practical lesson	Central classes - modified center .open center - modern methods -	My knowledge and skills	4=3+1 hours	7
Listening and giving ,questions practical exercises and work groups	Lecture and practical lesson	- Tissue culture - micropropagation stages - selection of the plant part - sterilization of the explants establishment stage - nutrient - medium - multiplication stage rooting stage - acclimatization .stage	My knowledge and skills	4=3+1 hours	8
Listening ,questions practical exercises and group work	Lecture and practical lesson	– Forest – Introduction – Characteristics of trees Distribution of forest in a word Tropical and subtropical – forests – Temperate – Cold zone forests – Temperate – Warm zone forests – Gallery forests and Nambus forests	My knowledge and skills	4=3+1 hours	9
Group work questions	Lecture and practical lesson	Forests in Iraq - Natural forests according to density - Open - forests - Medium-density forests Dense forests - according to - species - Oak forests - Pine forests - River forests - Artificial .forests	My knowledge and skills	4=3+1 hours	10
Mini-lesson work groups	Lecture and practical lesson	A scientific visit to one of the .forest chains	My knowledge and skills	4=3+1 hours	11
Practical exercise and work groups	Lecture and	Forest advantages – productive advantages – protection	My knowledge and skills	4=3+1 hours	12

	practical lesson	advantages – replication .advantages			
Asking questions	Lecture and practical lesson	- Primary advantages - wood .rubber - waste paper...etc - Secondary advantages - bark - production of suberin - insulation - for nutrition alcoholic production - aromatic perfumes - medicines - soap - .extraction - gum - resin and glue	My knowledge and skills	4=3+1 hours	13
Practical exercise questions	Lecture and practical lesson	- Vegetation - forests - Macaois - tundra - savanna - steppe - desert - tree growth stages - seedling stage - seedling stage column stage - young woody .stage - maturity stage	My knowledge and skills	4=3+1 hours	14
Practical exercise questions	Lecture and practical lesson	Pure Foresta characters of pure forest- Natural cases for forming a pure forest- Mixed forest- Equal mixture- Mixture -rules- Creating a mixed forest -Cayer's rule- Mixture shapes -Equal mixture- Linear mixture . Strip mixture- Mixture groups	My knowledge and skills	4=3+1 hours	15

Curriculum development plan -13
.Providing the possibility of academic support in organizing field visits - Providing an appropriate classroom environment that enables the teacher to diversify - .teaching strategies Providing information technology in the campus library - Hosting experts from outside the institute or from the work environment for which they - are preparing to benefit from their expertise in developing the course according to the .actual need of the labor market

Infrastructure -14	
Nursery and Forestry Textbook	Required textbooks -1
Supporting resources for each course	Main references (sources) -2

Scientific journals, as well as research, theses and dissertations of professors in the same .specialization	**A- Recommended books and ,references (scientific journals (.reports, etc**
www.google.com website	**...B - Electronic references, websites**

Course Evaluation -15

By distributing the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .16

	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals. Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available. It must be .linked to the programme description

Al-Musayyab Technical Institute	13- Educational institution

Department of Plant Production Technologies	14- Scientific Department / Center
Plant breeding and improvement /Plant Breeding and improvement	15- Course Name/Code
My presence	16- Available attendance forms
Fall Semester - Second Stage	17- Chapter/Year
hours in theoretical and practical classes 60	18- Number of study hours (total)
2024/28/2	Date of preparation of this .7 description

Course Objectives .8

,Granting the student a diploma in the theoretical and practical aspects which serves to prepare a graduate with a prestigious level and introduce .him to the practical arena

Course name

Dr. Marwa Hassan Jarallah

Teaching, learning and assessment strategies -9

A- Cognitive objectives

A1- Teaching students how to choose the best method of propagation and cultivation .for each crop

A2- Introducing students to how to develop service operations during growing
. seasons so that they become able to describe and serve them in their various types

A3- Enabling the student to know how to deal with laboratory materials and
. equipment

. B - Course specific skill objectives

.B1 - Providing the student with skills to apply scientific methods in plant breeding

B2- Training the student to produce crops using appropriate breeding methods to
. achieve high productivity

B3- Providing the student with the necessary skills to conduct laboratory tests
.related to plants and soil and how to give appropriate scientific judgments

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

A2- Developing the national spirit among students to increase production in terms of
.quantity and quality

A3- Instilling the concept of community service and the best way to deal with
.simple segments of society, such as farmers and peasants

A4- Developing the ethics of the agricultural engineering profession among students
.by following the correct professional behavior

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

Teaching and learning methods -10

,Giving theoretical and practical lectures through display screens, PowerPoint, slides
microscopes, plant sample examination experiments, and using various laboratory
.devices and equipment and a wooden canopy

Evaluation methods -11

-) Conducting daily quick testsQuize .(
- .Conducting monthly exams
- .Conducting midterm and final exams

14- Course structure					
Evaluation method	**Teaching method**	**Unit name/topic**	**Required learning outcomes**	**Watches**	**The week**
Questions and Answers	**Lecture and practical lesson**	**- Introduction Development of Plant Breeding and Improvement**	**My knowledge and skills**	**4= 2+2 hours**	1
practical mini lesson	**Lecture and practical lesson**		**My knowledge and skills**	**4= 2+2 hours**	
Asking questions	**Lecture and practical lesson**	**Objectives of plant breeding and : improvement ,Improving production , improving quality breeding for disease resistance, breeding .for special traits**	**My knowledge and skills**	**4= 2+2 hours**	2
Listening and asking questions	**Lecture and practical lesson**	**Plant cell - its - components - nucleus .chromosomes**	**My knowledge and skills**	**4=2+2 hours**	3
Practical ,exercise presentation and group work	**Lecture and practical lesson**	**- Types of cell division - normal division meiosis - double .fertilization**	**My knowledge and skills**	**4= 2+2 hours**	4
Practical ,exercise presentation and group work	**Lecture and practical lesson**	**- Pollination in plants self-pollination and its importance - cross-pollination and its .importance**	**My knowledge and skills**	**4= 2+2 hours**	5

Mini-lesson Discussion Practical exercise and working groups	Lecture and practical lesson	Mendel's laws in plant breeding and genetics the first law - the law - of segregation - the second law - the law of .free assortment	My knowledge and skills	4= 2+2 hours	6
,Case study practical exercises and work groups	Lecture and practical lesson	Genetic changes - their importance - their origin - their .development	My knowledge and skills	4= 2+2 hours	7
Listening and giving ,questions practical exercises and work groups	Lecture and practical lesson	Qualitative traits and their relationship to - genetic factors Quantitative traits and their relationship to .genetic factors	My knowledge and skills	4=2+2 hours	8
Listening ,questions practical exercises and group work	Lecture and practical lesson	The relationship between the inheritance of traits and environmental conditions - the interaction between genetics and environment in breeding and plant improvement	My knowledge and skills	4= 2+2 hours	9
Group work questions	Lecture and practical lesson	Methods of plant breeding and improvement - method of saving from similar - environments - acclimatization .evaluation	My knowledge and skills	4= 2+2 hours	10
Mini-lesson work groups	Lecture and practical lesson	- Election methods - individual election - quantitative election .cumulative election	My knowledge and skills	4=2+2 hours	11

Practical exercise and work groups	**Lecture and practical lesson**	**Hybridization method - single hybridization - - double hybridization multiple hybridization**	**My knowledge and skills**	**4= 2+2 hours**	12
Asking questions	**Lecture and practical lesson**	**- Genetic mutations - physical mutagens .chemical mutagens**	**My knowledge and skills**	**4= 2+2 hours**	13
Practical exercise questions	**Lecture and practical lesson**	**Genetics and development of plant disease resistant varieties**	**My knowledge and skills**	**4= 2+2 hours**	14
Practical exercise questions	**Lecture and practical lesson**	**Induction of - cytoplasmic sterility its importance - its use in plant breeding**	**My knowledge and skills**	**4=2+2 hours**	15

Curriculum development plan -13
Providing the possibility of academic support in organizing field - .visits Providing an appropriate classroom environment that enables the - .teacher to diversify teaching strategies Providing information technology in the campus library - Hosting experts from outside the institute or from the work - environment for which they are preparing to benefit from their expertise in developing the course according to the actual need of .the labor market

Infrastructure -14	
Methodological book for plant breeding and improvement	Required textbooks -1
Supporting resources for each course	Main references (sources) -2

,Scientific journals, as well as research theses and dissertations of professors .in the same specialization	A- Recommended books and ,references (scientific journals (.reports, etc
www.google.com website	,B - Electronic references ...websites

Course Evaluation -15 By distributing the grade out of 100 according to the tasks assigned to the ,student, such as daily preparation, daily, oral, monthly and written exams .reports, etc

Learning and teaching resources .16	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals .Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available. They must be linked to the .programme description

Al-Musayyab Technical Institute	8. Educational institution
Department of Plant Production Technologies	9. Scientific Department / Center
Winterfield crops	10. Course Name/Code
My presence	11. Available attendance forms
Semester / Fall First Stage	12. Chapter/Year
hours per semester, theoretical and practical 75	13. Number of study hours (total)
2024/28/2	Date of preparation of this .7 description
Course objectives : To grant the student a diploma in the theoretical and practical .8 aspects, which serves to prepare a graduate with a distinguished level and introduce .him to the scientific arena	
5-	

: Name of the course administrator .8

Teaching, learning and assessment strategies
A- Cognitive objectives A1- Teaching students how to deal with winter field crops so that they have modern scientific specifications, methods of managing them, and the factors affecting their .productivity A2- Introducing students to how to develop winter field crops so that they become .able to describe and serve them in various types A3- Enabling the student to know how to deal with laboratory equipment and .materials
. B - Course specific skill objectives B1 - Providing the student with skills to apply scientific methods in winter .crop management B2- Training the student to produce winter field crops to achieve high .productivity B3- Providing the student with the necessary skills to conduct laboratory tests related to crops and soil and how to give appropriate scientific .judgments
Teaching and learning methods
(Lecture, laboratory, methodical training, summer training) ,Giving scientific and theoretical lectures through display screens, PowerPoint, slides microscopes, plant sample examination experiments, and using various laboratory .devices and equipment and a wooden canopy

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

A2- Developing the national spirit among students to increase production in terms of .quantity and quality

A3- Instilling the concept of community service and the best way to deal with the .simple segments of the peasant and farming community

A4- Developing the professional ethics of agricultural engineers among students by .following the correct professional behavior

Teaching and learning methods

Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific) (visits, systematic field training, summer training

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

16. Course structure					
Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Written exam	The lecture	Economic importance of winter field crops	My knowledge and skills	5=3+2 hours	1
Written exam	The lecture	,Problems of winter crop production classification of winter crops according to .planting season and use	My knowledge and skills	=	2
Written exam	The lecture	The process of preparing and equipping the land for agriculture (the importance of ,carrying it out, the types of plows used (smoothing and leveling the machines used	My knowledge and skills	=	3
Written exam	The lecture	Methods of planting and serving crops scattering, lines, groves, advantages and) (disadvantages of each method	My knowledge and skills	=	4
Written exam	The lecture	Wheat crop production, economic importance, suitable environmental ,conditions, planting date, seed quantity fertilization, irrigation, growth, maturity .and harvest stages	My knowledge and skills	=	5
Written exam	The lecture	Wheat grain composition, stages of grain maturity, type of seed, the difference between fine and coarse wheat, and steps .for producing wheat flour	My knowledge and skills	=	6
Practical evaluation	The lecture is .practical	Barley crop production, economic importance, suitable environmental ,conditions, planting date, planting method ,seed quantity, fertilization, irrigation .growth, maturity and harvest stages	My knowledge and skills	=	7
Practical evaluation	The lecture is .practical	Production of the Shelmi crop, economic importance, origin, suitable environmental ,conditions, planting date, planting method sowing and fertilization, irrigation, stages of maturity and harvest, preparing seeds .for storage and processing	My knowledge and skills	=	8

Practical evaluation	The lecture is .practical	Production of wheat crop, economic ,importance, environmental conditions planting date, planting method, seed quantity, fertilization, irrigation, stages of .crop growth	My knowledge and skills	=	9
Practical evaluation	The lecture is .practical	Production of sugar beet and sugar cane ,crops, economic importance ,environmental conditions, planting date ,planting method, seed quantity ,fertilization, irrigation, crop growth stages .maturity, harvesting and harvesting	My knowledge and skills	=	10
Practical evaluation	The lecture is .practical	Qualitative characteristics of sugarcane .and beet and stages of sugar production	My knowledge and skills	=	11
Practical evaluation	The lecture practical	Broad bean production, economic importance, planting date, planting ,method, seed quantity, fertilization irrigation, ripening and harvesting	My knowledge and skills	=	12
Practical evaluation	The lecture is .practical	,Production of chickpeas and lentils economic importance, environmental ,conditions, planting date, planting method .seed quantity, fertilization, irrigation	My knowledge and skills	=	13
Written exam	The lecture	,Flax and safflower crop production economic importance, environmental ,conditions, planting date, planting method .fertilization, irrigation, seed quantity		=	14
Written exam	The lecture	,Agricultural cycles for winter crops definition of agricultural cycles, types of cycles, how to design agricultural cycles .with various examples		=	15

17. The structure of the decision	
Protected Agriculture Methodological Book, Course Educational Kit	Required textbooks -1

Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on winter field crops	A- Recommended books and ,references (scientific journals (.reports, etc
Searching websites in agricultural sciences	...B - Electronic references, websites

18.Course Evaluation

By distributing the grade out of 100 according to the tasks assigned to the ,student, such as daily preparation, daily, oral, monthly and written exams .reports, etc

Learning and teaching resources .13

	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals .Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available. They must be linked to the .programme description

Al-Musayyab Technical Institute	14. Educational institution
Department of Plant Production Technologies	15. Scientific Department / Center
Agriculturemachines equipment's	16. Course Name/Code
My presence	17. Available attendance forms
Semester / Fall First Stage	18. Chapter/Year
hours per semester, theoretical and practical 75	19. Number of study hours (total)
2024/28/2	Date of preparation of this .7 description
Course objectives : To grant the student a diploma in the theoretical and practical .8 aspects, which serves to prepare a graduate with a distinguished level and introduce .him to the scientific arena	
6-	
7-	
8-	
9-	
: Name of the course supervisor .8 Ms. Mina	

Teaching, learning and assessment strategies

A- Cognitive objectives

A1- Teaching students to understand the agricultural tractor and training them to use .it in the field

A2- Introducing students to the main parts of the tractor, their importance, and how .each part works

A3- Enabling the student to know how to deal with the devices and materials in the .tugboat

. B - Course specific skill objectives

.B1 - Providing the student with the skills of maintaining the tugboat

B2- Training the student to understand the operation of the towing systems .and identify faults to achieve high productivity

B3- Providing the student with the necessary skills to conduct general tests .related to the tug and soil and how to give appropriate scientific judgments

Teaching and learning methods

(Lecture, laboratory, methodical training, summer training)

,Giving scientific and theoretical lectures through display screens, PowerPoint, slides microscopes, plant sample examination experiments, and using various laboratory .devices and equipment and a wooden canopy

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

A2- Developing the national spirit among students to increase production in terms of .quantity and quality

A3- Instilling the concept of community service and the best way to deal with the .simple segments of the peasant and farming community

A4- Developing the professional ethics of agricultural engineers among students by .following the correct professional behavior

Teaching and learning methods

Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific) (visits, systematic field training, summer training

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

19. Course structure					
Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Written exam	The lecture	Knowing the importance of agricultural mechanization - types of tractors - public .safety	My knowledge and skills	5=3+2 hours	1
Written exam	The lecture	Study the main parts of the tractor and the ,function of each part - transmission devices .their parts and function	My knowledge and skills	=	2
Written exam	The lecture	Study of the towing system (fuel and cooling system, parts and importance), faults .and maintenance	My knowledge and skills	=	3
Written exam	The lecture	Study of the lubrication system - air purification system - exhaust system and .muffler - their parts and function	My knowledge and skills	=	4
Written exam	The lecture	Study of the electrical system - parts - the benefit of each part, its function and .maintenance	My knowledge and skills	=	5
Written exam	The lecture	Knowing the devices and means of exploiting power in the tugboat: the hydraulic device - the traction shaft - the rear drive shaftPTO .the drive pulley -	My knowledge and skills	=	6
Practical evaluation	The is lecture .practical	Study of the structure of the tugboat - parts - and benefits - steering system - adjusters .steering device in the tugboat	My knowledge and skills	=	7
Practical evaluation	The is lecture .practical	Knowing the types of plows - the importance of the plowing process - the .characteristics of good plowing	My knowledge and skills	=	8
Practical evaluation	The is lecture .practical	Study of rotary-reversible ploughs - rotary-reversible disc ploughs - their use - their parts - their maintenance and methods of .ploughing with them	My knowledge and skills	=	9
Practical evaluation	The is lecture .practical	- Study of chisel ploughs - rotary ploughs .subsoil plough - their uses - their parts	My knowledge and skills	=	10

Practical evaluation	The is lecture .practical	– Knowledge of soil smoothing equipment its use – its parts – leveling, planning and channel digging machines – their .importance and uses	My knowledge and skills	=	11
Practical evaluation	The is lecture .practical	Study of mechanized agriculture - fertilizer and seed spreading machine - its parts - its .types - its calibration	My knowledge and skills	=	12
Practical evaluation	The is lecture .practical	Study of the fertilized seed in rows - its parts .its field calibration - laboratory calibration -	My knowledge and skills	=	13
Written exam	The lecture	- Study of agricultural machinery in lines .potato cultivation - types - calibration		=	14
Written exam	The lecture	Fodder cutting machines - their types - their parts - the combined harvester - its operation .the main groups of the harvester -		=	15

20. Course structure	
Protected Agriculture Methodological Book, Course Educational Kit	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on winter field crops	A- Recommended books and references (.scientific journals, reports, etc)
Searching websites in agricultural sciences	...B - Electronic references, websites

21.Course Evaluation By distributing the grade out of 100 according to the tasks assigned to the ,student, such as daily preparation, daily, oral, monthly and written exams .reports, etc

Learning and teaching resources .22	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals .Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available. They must be linked to the .programme description

Al-Musayyab Technical Institute	1- Educational institution
Department of Plant Production Technologies	2- / Scientific Department Center
General soil	3- Course Name/Code
The lecture	4- Available attendance forms
quarterly	5- Chapter/Year

60	6- Number of study hours (total)
2024/28/2	Date of preparation of this .7 description
Course objectives : To grant the student a diploma in the theoretical and practical .8 aspects, which will serve as a graduate with a distinguished level and introduce him .to the practical arena	
Name of the course supervisor : Mr. Hamed Abdel Zaid .8	

Teaching, learning and assessment strategies

A- Cognitive objectives

A1- Teaching the student how to study the physical properties of soil such as .density, moisture, mechanical analysis, etc

,Introducing the student to the chemical properties of soil, such as its strength -2 .lime, gypsum, etc

Enabling the student to know how to deal with medical materials and devices

. B - Course specific skill objectives

B1 - Providing the student with skills to study the morphological .characteristics of soil

Training the student to know the relationship between soil and plant and -2 .achieve high productivity

Providing the student with the necessary skills to conduct laboratory tests -3 .related to plants and soil and how to give appropriate scientific judgments

Teaching and learning methods -9

(Lecture, laboratory, methodical training, summer training)

Practical and theoretical lectures, laboratory, scientific films, agricultural)
(facility, scientific visits, systematic field training, summer training

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

Developing the national spirit among students to increase production in terms of -2
.quantity and quality

Instilling the concept of community service and the best way to deal with the -3
.simple segments of society, farmers and peasants

Developing the ethics of the agricultural engineering profession among students -4
.by following the correct professional behavior

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

10- Course structure					
Evaluation method	**Teaching method**	**Unit name/topic**	**Required learning outcomes**	**Watches**	**The week**
Questions and answers	**The lecture**	**Soil science - its branches - its importance and the goal of soil analysis**	**My knowledge and skills**	**4=3+1 hours**	1
Written exam	**The lecture**	**Some morphological properties of soil**	**My knowledge and skills**	=	2
Written exam	**The lecture**	**Physical properties of soil and their relationship to plant growth**	**My knowledge and skills**	=	3
Written exam	**The lecture**	**Physical properties of soil and their relationship to plant growth**	**My knowledge and skills**	=	4
Written exam	**The lecture**	**Physical properties of soil and their relationship to plant growth**	**My knowledge and skills**	=	5
Written exam	**The lecture**	**soil water**	**My knowledge and skills**	=	6
Practical evaluation	**The lecture practical**	**Soil temperature and soil air**	**My knowledge and skills**	=	7
Group work questions	**The lecture**	**Organic colloids**	**My knowledge and skills**	=	8
Practical evaluation	**The lecture practical**	**clay minerals**	**My knowledge and skills**	=	9

Practical evaluation	**The lecture And a practical lesson**	**Soil cation exchange capacity**	**My knowledge and skills**	=	10
Practical evaluation	and **Lecture** practical lesson	**Electrical conductivity of soilEc**	**My knowledge and skills**	=	11
Practical evaluation	**The lecture practical**	**soil salinity**	**My knowledge and skills**	=	12
Practical evaluation	**The lecture practical**	**Nutrients and their importance to plants**	**My knowledge and skills**	=	13
Written exam	**The lecture** And a practical lesson	**Lime and gypsum in soil**	**My knowledge and skills**	=	14
Written exam	**The lecture**	**Lime and gypsum in soil**	**My knowledge and skills**	=	15

11- The structure of the decision	
Protected Agriculture Methodological Book, Course Educational Kit	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2

Foreign and Arabic references on protected agriculture	A- Recommended books and ,references (scientific journals (.reports, etc
Search websites in agricultural sciences	...B - Electronic references, websites

12- Course Evaluation

By distributing the grade out of 100 according to the tasks assigned to the ,student, such as daily preparation, daily, oral, monthly and written exams .reports, etc

13- Learning and teaching resources

	Curriculum books, if any
	Main References..Sources
	Supporting books and references .recommended by scientific journals .Reports
	Electronic references websites

sustainable fruit production

1- Course name
sustainable fruit production
2 Course code -
3 Semester / Year -
/ Semester2023 -2024
4 Date of preparation of this description -
2024/
5 Available forms of attendance -

compulsory
6 Number of study hours (total) / Number of units (total) -
140/140
7 Name of the course supervisor (if more than one name is mentioned) -
:the name
8 Course objectives .

Providing the student with information that enables him to identify On the most important types Trees Permanent Successful in Iraq and how to perform the most important operations The service is running, it is orchards Fruit Permanent Knowing the environmental factors affecting .perennial fruit trees and orchard cultivation systems	**Subject objectives**

9 Strategy T Education and Learning .

Education Strategies **It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and - setting future plans for each of (presentation - coordination - training discussion) and organizing the classroom environment and classroom .management for the purpose of developing students' education** **Learning strategies** **It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they .use in learning**	**Strategy**

10 Course Structure .

road Evaluation	road Learning	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	**a lecture**	**,Habitat, distribution economic and ,nutritional importance .citrus classification**	**Subject understanding and comprehension** **To apply it correctly**	**2**	**the first**

exam	a lecture	,Environmental factors climate conditions, soil conditions and their impact on citrus .cultivation in Iraq	Subject understanding and comprehension To apply it correctly	2	the second
exam	a lecture	and falling process -Fruits (June fall, pre (harvest fall	Subject understanding and comprehension To apply it correctly	2	the third
+ Report Evaluation	a lecture	Citrus cultivation and ,production (varieties ,rootstocks, propagation ,pruning, fertilization	Understanding the subject and the ability to apply it effectively	2	Fourth

		.Irrigation, harvest	correct		
exam	a lecture	Citrus cultivation and ,production) varieties ,origins, propagation ,pruning, fertilization .irrigation, harvesting	Subject understanding and comprehension To apply it correctly	2	Fifth
exam	a lecture	,Environmental factors climate conditions, soil conditions and their impact .on palm cultivation in Iraq	Subject understanding and comprehension To apply it correctly	2	Sixth
exam	a lecture	,Vegetative propagation care of seedlings, planting in the nursery, dates of planting in the permanent place and its service	Subject understanding and comprehension To apply it correctly	2	Seventh
exam	a lecture	Palm tree service ,operations, fertilization ,irrigation, pruning consecration , fruit thinning, removal of	Subject understanding and comprehension To apply it correctly	2	The eighth

		shoots, palm .mechanization			
exam	a lecture	,Metasinia phenomenon stages of fruit development, pollen extraction, pollination process, review of the ten commercial varieties in the .country	Subject understanding and comprehension To apply it correctly	2	Ninth
Repo +rt evalu ation	a lecture	,Olive, habitat, distribution economic and nutritional .importance	Subject understanding and comprehension To apply it correctly	2	tenth
exam	a lecture	Environmental factors, the ,phenomenon of buoyancy its causes, and ways to .overcome it	Subject understanding and comprehension To apply it correctly	2	elevent h
exam	a lecture	,Banana, habitat distribution, economic and ,nutritional importance ,environmental conditions .reproduction, varieties	Subject understanding and comprehension To apply it correctly	2	the second ten
exam	a lecture	,Sea buckthorn, loquat habitat, spread, economic ,and nutritional importance ,environmental factors .reproduction, varieties	Subject understanding and comprehension To apply it correctly	2	the third ten
exam	a lecture	,Mango, guava, habitat distribution, economic and ,nutritional importance ,environmental factors .reproduction, varieties	Subject understanding and comprehension To apply it correctly	2	Fourth ten
exam	a lecture	.Scientific visit	Subject understanding and comprehension To apply it correctly	2	fifteenth
11 Course Evaluation .					

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 :according to the following mechanism ,% **1) The grade for the annual subjects is divided into two parts -50 effort and %50 (final % .**

By the subject teacher and depends on the student's attendance, daily exams, homework andbehavior .

Graduation for second year students depends on writing a scientific .research and discussion

Continuous monitoring of the student's attendance at the theoretical lecture and laboratory, as the student's absences are considered10 % .of the total hours for that course

12 Learning and teaching resources .

Fruit production book - Soil and plant nutrition - Plant world book - Plant .biotechnology book	**Required textbooks (methodology if any)**
.First: peer-reviewed scientific journals .Second: Academic books .Third: Websites Fourth: Scientific encyclopedias .Fifth: Scientific research	**Main References (Sources)**
Curriculum books - study bags - laboratories .summer training -	**Recommended supporting books and .... references (scientific journals, reports)**
. Agricultural websites	**Electronic references, websites**

Statistics and planning experiments

1- Course name
Statistics and planning experiments
2 Course code -
3 Semester / Year -
quarterly
4 Date of preparation of this description -
2024
5 Available forms of attendance -
compulsory
6 Number of study hours (total) / Number of units (total) -
140/140
7 Name of the course supervisor (if more than one name is mentioned) -
M.M.Dhu Al-Fiqar Ali
8 Course objectives -

Providing the student with information that enables him to know ,how to implement agricultural experiments in the field, take data .classify it, and prepare it for statistical analysis	**Subject objectives**

9 Teaching and learning strategies -	
Education Strategies **It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and - setting future plans for each of (presentation - coordination - training discussion) and organizing the classroom environment and classroom .management for the purpose of developing students' education** **Learning strategies** **It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they .use in learning**	**Strategy**

10 Course Structure.					
Evaluation method	**Learning method**	**Name of the unit or topic**	**Required learning outcomes**	**Watches**	**The week**
exam	**a lecture**	**A historical overview , of statistics definitions and ,concepts (society , environment ,variable, observation data , sample, types of (samples**	**Understanding the subject and being able to apply it correctly**	**1**	**the first**
exam	**a lecture**	**Data collection , data presentation, tabular , presentation graphical presentation**	**Understanding the subject and being able to apply it correctly**	**1**	**the second**
exam	**a lecture**	**Measures of central ,tendency : median mode, mean**	**Understanding the subject and being able to apply it correctly**	**1**	**the third**
+ Report Evaluation	**a lecture**	**Measures of ,dispersion: range variance, standard deviation**	**Understanding the subject and being able to apply it correctly**	**1**	**Fourth**
exam	**a lecture**	**Measures of dispersion: mean deviation, standard error, coefficient of variation**	**Understanding the subject and being able to apply it correctly**	**1**	**Fifth**
exam	**a lecture**	**simple linear correlation**	**Subject understanding and comprehension**	**1**	**Sixth**
			To apply it correctly		
exam	**a lecture**	**simple linear regression**	**Understanding the subject and being able to apply it correctly**	**1**	**Seventh**

exam	a lecture	Planning agricultural experiments, scientific research, scientific research requirements and objectives	Understanding the subject and being able to apply it correctly	1	The eighth
exam	a lecture	Types of agricultural experiments, human requirements for ,agricultural experiments errors in agricultural experiments	Understanding the subject and being able to apply it correctly	1	Ninth
+ Report Evaluation	a lecture	Analysis of variance. The basic idea of analysis of variance. Using analysis of variance with .experimental designs	Understanding the subject and being able to apply it correctly	1	tenth
exam	a lecture	Types of experimental designs, choosing the ,appropriate design designing the perfect dinner	Understanding the subject and being able to apply it correctly	1	eleventh
exam	a lecture	Completely randomized design in case of unequal frequency	Understanding the subject and being able to apply it correctly	1	the second ten
exam	a lecture	Randomized complete block design	Understanding the subject and being able to apply it correctly	1	the third ten
exam	a lecture	Estimating missing value in a randomized complete block design	Understanding the subject and being able to apply it correctly	1	Fourth ten
exam	a lecture	Latin square design	Understanding the subject and being able to apply it correctly	1	fifteenth
11 Course Evaluation .					

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 :according to the following mechanism ,% **1) The grade for annual subjects is divided into two parts -50 effort and %50 :(final %** **The evaluation is done by the subject teacher and depends on the student's * .attendance, daily exams, homework, and behavior during the lecture** **2 Graduation research for second-year students based on writing a scientific research - .and discussion**
In addition to the continuous monitoring of the student's attendance at the theoretical lecture and laboratory, the student is considered not to have completed the course if his absences exceed10 .of the total hours for that course %

12 Learning and teaching resources -

Basics of Plant Diseases Book - How to Become a Beekeeper Book - Soil Fertility and Plant Nutrition Book - Orchard Insects Book - Plant .World Book - Plant Biotechnology Book	**Required textbooks (methodology if (any**
.First : peer-reviewed scientific journals **.Second : Academic books** **.Third : Websites** **.Fourth : Scientific encyclopedias** **.Fifth : Scientific research**	**References (Sources)**
- Curriculum books - study bags - laboratories .summer training	**Recommended supporting books ,and references (scientific journals .... (reports**
.Agricultural websites	**references , websites**

Farm management

1- Course name	
Farm management	
2 Course code -	
3 Semester / Year -	
quarterly	
4 Date of preparation of this description -	
2024	
5 Available forms of attendance -	
compulsory	
6 Number of study hours (total) / Number of units (total) -	
140/140	
7 Name of the course supervisor (if more than one name is mentioned) -	
8 Course objectives .	
Providing the student with information that enables him to know farm costs, the theory of comparative costs, determining the level of production, planning and budgeting, managing production .elements, and measures of economic efficiency of the farm	**Subject objectives**
9 Teaching and learning strategies .	
Education Strategies **It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and - setting future plans for each of (presentation - coordination - training discussion) and organizing the classroom environment and managing the .classroom for the purpose of developing students' education**	**Strategy**

Learning strategies	
It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they .use in learning	

10 Course Structure

Evaluation method	road Learning	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	a lecture	Definitions of farm management and its objectives	Understanding the subject and being able to apply it correctly	1	the first
exam	a lecture	.Production costs	Understanding the subject and being able to apply it correctly	1	the second
exam	a lecture	Economic principles and rules Home used in farm management .	Understanding the subject and being able to apply it correctly	1	the third
+ Report Evaluation	a lecture	A- The principle of .diminishing returns	Understanding the subject and being able to apply it correctly	1	Fourth
exam	a lecture	B - The principle of farm costs and the theory of comparative .costs	Understanding the subject and being able to apply it correctly	1	Fifth
exam	a lecture	C- The principle of determining the level of production. D- The principle of equal returns and the principle of .opportunity costs	Understanding the subject and being able to apply it correctly	1	Sixth
exam	a lecture	Replacement or substitution to reduce cost	Understanding the subject and	1	Seventh

			being able to apply it correctly		
exam	a lecture	Farm planning and .budgeting	Understanding the subject and being able to apply it correctly	1	The eighth
exam	a lecture	Farm management methods A - Complete .and partial plan	Understanding the subject and being able to apply it correctly	1	Ninth
+Report evaluation	a lecture	B - The method of substitution and replacement between projects	Understanding the subject and being able to apply it correctly	1	tenth
exam	a lecture	C- Direct comparison method. D- Partial .change method	Understanding the subject and being able to apply it correctly	1	eleventh
exam	a lecture	,Farm accounts extinction and methods of .calculating it	Understanding the subject and being able to apply it correctly	1	the second ten
exam	a lecture	Managing production elements with work efficiency and capital .management	Understanding the subject and being able to apply it correctly	1	the third ten
exam	a lecture	Economics of farm purchase and .valuation methods	Understanding the subject and being able to apply it correctly	1	Fourth ten
exam	a lecture	Farm economic efficiency measures and farm budgeting	Understanding the subject and being able to apply it correctly	1	fifteenth
11 Course Evaluation .					

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 :according to the following mechanism ,%

1) The grade for annual subjects is divided into two parts -50 effort and %50 :(final %

,The evaluation is done by the subject teacher and depends on the student's attendance * .daily exams, homework, and behavior during the lecture

2 Graduation research for second-year students based on writing a scientific research - .and discussion

In addition to the continuous monitoring of the student's attendance at the theoretical lecture and laboratory, the student is considered not to have completed the course if his absences exceed10 .of the total hours for that course %

12 Learning and teaching resources -

Required textbooks (methodology if any)	**Basics of Plant Diseases Book - How to Become a Beekeeper Book - Soil Fertility and Plant Nutrition Book - Orchard Insects Book - Plant World Book - Plant .Biotechnology Book**
Main References (Sources)	**.First: peer-reviewed scientific journals** **.Second: Academic books** **.Third: Websites** **.Fourth: Scientific encyclopedias** **.Fifth: Scientific research**

Curriculum books - study bags - laboratories .summer training -	**Recommended supporting books and .... references (scientific journals, reports)**
.Agricultural websites	**Electronic references, websites**

Deciduous fruit production

1. Course name	
Deciduous fruit production	
2. Course code	
3. Semester/Year	
My quarter	
4. Date of preparation of this description	
2024	
5. Available forms of attendance	
compulsory	
6. Number of study hours (total) / Number of units (total)	
140/140	
7. Name of the course supervisor (if more than one name is mentioned)	
8. Course objectives	
Providing the student with information that enables him to know how to choose the best method of propagation and cultivation of each one and perform all service operations during the different growth seasons and all environmental conditions suitable for .producing trees economically	**Subject objectives**
9. Teaching and learning strategies	

Education Strategies	Strategy
It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and - setting future plans for each of (presentation - coordination - training discussion) and organizing the classroom environment and classroom .management for the purpose of developing students' education **Learning strategies** **It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they use in .learning**	

10. Course structure

road Evaluation	road Learning	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	a lecture	The importance of fruits and methods of their classification, the economic and nutritional importance of deciduous fruits	Subject understanding and comprehension To apply it correctly	2	the first
exam	a lecture	Geographical distribution of deciduous fruits in Iraq and the Arab world, the most important problems of fruit production in Iraq and the role of rest in buds	Subject understanding and comprehension To apply it correctly	2	the second
exam	a lecture	Theoretical foundations for ,establishing new orchards including the selection of ,the appropriate plot of land its preparation and its .preparation for planting	Subject understanding and comprehension To apply it correctly	2	the third

+ Report Evaluation	a lecture	Grapes - habitat and spread, geographical distribution, nutritional and economic value	Subject understanding and comprehension To apply it correctly	2	Fourth
exam	a lecture	Grapes - suitable environmental conditions (soil, climate), grape propagation, grape varieties	Subject understanding and comprehension To apply it correctly	2	Fifth
exam	a lecture	,Figs - Origin and spread nutritional and economic value, suitable climate and soil, varieties	Subject understanding and comprehension To apply it correctly	2	Sixth
exam	a lecture	Apple - Origin and distribution, nutritional ,and economic value ,suitable climate and soil varieties, propagation	Subject understanding and comprehension To apply it correctly	2	Seventh
exam	a lecture	Pear - and quince ,habitat and distribution nutritional and economic value, suitable environmental conditions ,(soil, climate) ,propagation methods varieties	Subject understanding and comprehension To apply it correctly	2	The eighth
exam	a lecture	Peaches - habitat and distribution, nutritional value, environmental ,suitability, peach groups ,propagation methods varieties	Subject understanding and comprehension To apply it correctly	2	Ninth
+Report evaluation	a lecture	Apricot - habitat and distribution, nutritional ,and economic value	Subject understanding	2	tenth

		,suitable environment propagation, varieties	and comprehension To apply it correctly		
exam	a lecture	,Pear - original habitat nutritional and economic value, suitable ,environment, propagation varieties	Subject understanding and comprehension To apply it correctly	2	eleventh
exam	a lecture	- Almonds and cherries original habitat, nutritional ,and economic value cherry clusters, suitable ,environment, propagation varieties	Subject understanding and comprehension To apply it correctly	2	the second ten
exam	a lecture	Pomegranate and persimmon - original habitat, nutritional and economic value, suitable ,environment, propagation varieties	Subject understanding and comprehension To apply it correctly	2	the third ten
exam	a lecture	Pistachios, walnuts and - pecans their original habitat, nutritional and economic value, suitable ,environment, propagation varieties	Subject understanding and comprehension To apply it correctly	2	Fourth ten
exam	a lecture	Modern trends in fruit production - the importance of hormones and their areas of use, the use of mechanization in orchards, the most important operations required after harvesting	Subject understanding and comprehension To apply it correctly	2	fifteenth
11. Course Evaluation					

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 . %

12. Learning and teaching resources	
Basics of Plant Diseases Book - How to Become a Beekeeper Book - Soil Fertility and Plant Nutrition Book - Orchard Insects Book - Plant World Book - Plant .Biotechnology Book	**Required textbooks (methodology if any)**
.First: peer-reviewed scientific journals **.Second: Academic books** **.Third: Websites** **.Fourth: Scientific encyclopedias** **.Fifth: Scientific research**	**References (Sources)**
- Curriculum books - study bags .laboratories - summer training	**Recommended supporting books and .... references (scientific journals, reports)**
. Agricultural websites	**references , websites**

Organic farming

1- Course name
Organic farming
2 Course code -
3 Semester / Year -
My quarter
4 Date of preparation of this description -
2024

5 Available forms of attendance -	
compulsory	
6 Number of study hours (total) / Number of units (total) -	
140/140	
7 Name of the course supervisor (if more than one name is mentioned) -	
8 Course objectives .	
Providing the student with information enable him to know How to Teaching And training Students are trained in the manufacture -: and use of organic fertilizers from animal and plant waste, which is agriculture to fertilize the soil instead of chemical fertilizers, in order to produce agricultural products such as crops, vegetables and fruits free from diseases and pesticide pollution, in addition to .not polluting the environment, whether soil or water	**Subject objectives**
9 Teaching and learning strategies .	
Education Strategies **It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and - setting future plans for each of (presentation - coordination - training discussion) and organizing the classroom environment and classroom .management for the purpose of developing students' education** **Learning strategies** **It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they use in .learning**	**Strategy**
10 Course Structure .	

Evaluation method	road Learning	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	a lecture	,Introduction historical ,overview definition of organic - agriculture basic objectives of organic agricultural .production	Understanding the subject and being able to apply it correctly	2	the first
exam	a lecture	The importance and reasons for the shift to organic agriculture .globally	Understanding the subject and being able to apply it correctly	2	the second

exam	a lecture	What are plant and animal wastes - their sources - how to benefit from them in soil - fertilization their nutritional content	Understanding the subject and being able to apply it correctly	2	the third
+ Report Evaluation	a lecture	The role of organic matter in dissolving and facilitating the absorption of nutrients necessary for plant growth and soil water .retention	Understanding the subject and being able to apply it correctly	2	Fourth
exam	a lecture	Manufacture of fertilizers from animal waste poultry and) ruminant (manure	Understanding the subject and being able to apply it correctly	2	Fifth

exam	a lecture	Industrial organic fertilizer - (compost) - properties preparation .method	Understanding the subject and being able to apply it correctly	2	Sixth
exam	a lecture	Factors affecting the preparation of organic fertilizer during fermentation - processes Additives to organic fertilizer	Understanding the subject and being able to apply it correctly	2	Seventh
exam	a lecture	Bio-organic fertilization - (biofertilizers) nitrogen fixers phosphate - solvents	Understanding the subject and being able to apply it correctly	2	The eighth
exam	a lecture	Methods of adding organic fertilizer to the soil	Understanding the subject and being able to apply it correctly	2	Ninth

+Report evaluation	a lecture	Agricultural rotations and green manure	Understanding the subject and being able to apply it correctly	2	tenth
exam	a lecture	Scientific foundations for organic fruit and vegetable production	Understanding the subject and being able to apply it correctly	2	eleventh
exam	a lecture	Reasons for switching to organic farming and organic production	Understanding the subject and being able to apply it correctly	2	the second ten
exam	a lecture	Organic Product Specifications Field Visit to - One of the Organic Farms in the Region	Understanding the subject and being able to apply it correctly	2	the third ten

exam	a lecture	Organic Product Specifications Field Visit to - One of the Organic Farms in the Region	Understanding the subject and being able to apply it correctly	2	Fourth ten
exam	a lecture	Show films about the development of organic farming	Understanding the subject and being able to apply it correctly	2	fifteenth

11 Course Evaluation.

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 :according to the following mechanism ,%

1-) The grade for the annual subjects is divided into two parts50 effort and % 50 · (final %

The evaluation is done by the subject teacher and depends on the * student's attendance, daily exams, homework, and behavior during the .lecture

2 Graduation research for second-year students based on writing a - .scientific research and discussion

In addition to the continuous monitoring of the student's attendance at the theoretical lecture and laboratory, the student is considered not to have completed the course if his absences exceed10 of the total hours for that % .course

12 Learning and teaching resources .	
Basics of Plant Diseases Book - A - Soil Fertility and Plant Nutrition Book - The World .of Plants Book - Plant Biotechnology Book	**Required textbooks (methodology if any)**
.First: peer-reviewed scientific journals .Second: Academic books .Third: Websites .Fourth: Scientific encyclopedias .Fifth: Scientific research	**References (Sources)**
- Curriculum books - study bags - laboratories .summer training	**Recommended supporting books and references (scientific .... (journals, reports**
. Agricultural websites	**references , websites**

Care and storage

1- Course name
Care and storage
2 Course code -
3 Semester / Year -
quarterly
4 Date of preparation of this description -
2024
5 Available forms of attendance -
compulsory
6 Number of study hours (total) / Number of units (total) -
140/140
7 Name of the course supervisor (if more than one name is mentioned) -

8 Course objectives.

Support The student With information Enable him to Learn about the processes of sorting, grading and packing fruits, learn about artificial ripening methods, and learn about the processes of cooling .and storing fruits	Subject objectives

9 Teaching and learning strategies.

Education Strategies It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and setting future plans for each of (presentation - coordination - training - discussion) and organizing the classroom environment and classroom 'management for the purpose of developing students .education Learning strategies It includes the behaviors and procedures that students engage in that are intended to influence how they are able to process information and learn different tasks. Learning is strategic when students are aware of the specific skills and strategies (procedures and methods) that they use in .learning	Strategy

10 Course Structure.

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	a lecture	The importance of storing fruits and ,vegetables the general principles followed in .storage	Understanding the subject and being able to apply it correctly	1	the first
exam	a lecture	Stages of fruit growth and ,development fruit care	Understanding the subject and being able to apply it correctly	1	the second

		before and after picking			
exam	a lecture	components of fruits and ,vegetables nutritional and medicinal value of fruits and vegetables	Understanding the subject and being able to apply it correctly	1	the third
+ Report Evaluation	a lecture	Biochemical changes during the growth and development stages of ,fruits environmental effects on fruits before harvest	Understanding the subject and being able to apply it correctly	1	Fourth
exam	a lecture	changes of horticultural crops after harvest	Understanding the subject and being able to apply it correctly	1	Fifth
exam	a lecture	The relationship between fruit storage and ,respiration environmental effects on fruits after	Understanding the subject and being able to apply it correctly	1	Sixth
		Picking			
exam	a lecture	The relationship between water loss through transpiration and fruits	Understanding the subject and being able to apply it correctly	1	Seventh

		,after harvest protecting fruits during picking and transportation			
exam	a lecture	Methods of artificial ripening of fruits and vegetables after picking	Understanding the subject and being able to apply it correctly	1	The eighth
exam	a lecture	Methods of ,selection ,sorting grading and packing of fruits	Understanding the subject and being able to apply it correctly	1	Ninth
+ Report Evaluation	a lecture	Methods of ,selection ,sorting grading and packing of vegetables	Understanding the subject and being able to apply it correctly	1	tenth
exam	a lecture	Modern methods of ,fruit picking fruit packing houses	Understanding the subject and being able to apply it correctly	1	elevent h
exam	a lecture	Cooling methods for primary storage	Understanding the subject and being able to apply it correctly	1	the second ten
exam	a lecture	Modern storage ,methods how to create and build cold stores	Understanding the subject and being able to apply it correctly	1	the third ten
exam	a lecture	Physiological damage during	Understanding the subject and being	1	Fourth ten

		storage and marketing	**able to apply it correctly**		
exam	**a lecture**	**Low temperature damage**	**Understanding the subject and being able to apply it correctly**	**1**	**fifteenth**

11 Course Evaluation -

The student's evaluation in the educational program depends entirely on daily preparation, daily, oral, monthly and written exams, and reports. Note that the passing grade is50 :according to the following mechanism ,% **1-) The grade for the annual subjects is divided into two parts50 effort and % 50 · (final %** **The evaluation is done by the subject teacher and is based on the student's .attendance, daily exams, homework and behaviour during the lecture** **2 Graduation research for second-year students based on writing a - .scientific research and discussion** **In addition to the continuous monitoring of the student's attendance at the theoretical lecture and laboratory, the student is considered not to have completed the course if his absences exceed10 of the total hours for that % .course**

12 Learning and teaching resources -

Basics book A Plant nutrition- - The Plant World Book - Plant Biotechnology .Book	**Required textbooks (methodology if (any**
.First: peer-reviewed scientific journals .Second: Academic books .Third: Websites .Fourth: Scientific encyclopedias .Fifth: Scientific research	**References (Sources)**
- Curriculum books - study bags .laboratories - summer training	**Recommended supporting books and ,references (scientific journals .... (reports**
. Agricultural websites	**Electronic references , websites**

Course Description Form

This course description provides a brief summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available. It must be linked to the program .description

Al-Musayyab Technical Institute	1- Educational institution
Department of Plant Production Technologies	2- Scientific Department / Center
Seed production	3- Course Name/Code
The lecture	4- Available attendance forms
quarterly	5- Chapter/Year
hours per semester, theoretical and 60 practical	6- Number of study hours (total)
2024/28/2	Date of preparation of .7 this description
Course Objectives .8	
Granting the student a diploma in the theoretical and practical aspects, which serves to prepare a graduate with a .prestigious level and push him into the scientific arena	

Name of the course supervisor : M.M. Dhu al-Fiqar Ali Khanyab

Teaching, learning and assessment strategies -9
A- Cognitive objectives A1- Teaching students how to identify the method of raising each plant to produce .seeds Introducing students to how to conduct important tests on seeds so that they -2 .become able to describe them in their various types Enabling the student to know how to deal with laboratory materials and -3 .equipment
. B - Course specific skill objectives B1 - Providing the student with skills to apply scientific methods regarding seed testing so that he becomes able to propagate them using modern methods such as .plant tissue culture Training the student to conduct seed certification processes to achieve -2 .high productivity Providing the student with the necessary skills to conduct laboratory tests -3 . related to seeds and soil and how to give appropriate scientific judgments
Teaching and learning methods

,Giving scientific and theoretical lectures through display screens, PowerPoint, slides microscopes, plant sample examination experiments, and using various laboratory .devices and equipment and a wooden canopy

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a scientific manner

Developing the national spirit among students to increase production in terms of -2 .quantity and quality

Instilling the concept of community service and the best way to deal with the -3 .simple segments of society, farmers and peasants

Developing the ethics of the agricultural engineering profession among students -4 .by following the correct professional behavior

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

10- Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	Watches	The week
Listening and asking questions	The lecture	The concept of seeds, the importance of seeds, a historical overview of seed production	My knowledge and skills	4=3+1 hours	1
Practical ,exercise presentation and group work	The lecture And a practical lesson	Don't change	My knowledge and skills	=	2
Written exam	and Lecture practical lesson	Methods of breeding cross- ,pollinated crops (import selection, hybridization, hybrid (production	My knowledge and skills	=	3
Written exam	and Lecture practical lesson	Methods of breeding self- ,pollinating crops (import selection, hybridization, hybrid (production	My knowledge and skills	=	4
Mini-lesson Discussion Practical exercise and groups	and Lecture practical lesson	Seed certification, importance of seed certification, stages of seed production	My knowledge and skills	=	5
,Case study practical exercise and groups	and Lecture practical lesson	Genetic principles Causes of low genetic purity - Factors that help maintain genetic purity	My knowledge and skills My knowledge and skills	=	6
Listening and asking questions	The lecture practical	Agricultural principles of seed production	My knowledge and skills	=	7
Listening and asking questions	The lecture practical	Field Inspection - Conditions and Objectives - Field Inspector Specifications	My knowledge and skills	=	8

Practical evaluation	**The lecture practical**	**Dormancy in seeds, its causes and treatment**	**My knowledge and skills**	=	9
Listening and asking questions	**The lecture practical**	**Wheat and rice seed production**	**My knowledge and skills**	=	10
Practical evaluation	**The lecture practical**	**Yellow corn seed production**	**My knowledge and skills**	=	11
Listening and asking questions	**The lecture practical**	**Cotton seed production - sugar beet**	**My knowledge and skills**	=	12
Practical evaluation	**The lecture practical**	**Solanaceae family seeds production - tomato - eggplant pepper -**	**My knowledge and skills**	=	13
Written exam	**The lecture**	**Production of Cucurbitaceae - seeds - squash - watermelon watermelon**	**My knowledge and skills**	=	14
Practical evaluation	**practical**	**- Production of gourd seeds - pumpkin - watermelon - watermelon**	**My knowledge and skills**	=	15

11- The structure of the decision	
,Methodical Agriculture Book Educational Kit for the Course	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arab references on agriculture and seed production	A- Recommended books and references (scientific (.journals, reports, etc
Searching websites in agricultural sciences	,B - Electronic references ...websites

12- Course Evaluation

By distributing the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and .written exams, reports, etc	
Learning and teaching resources .13	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references recommended by scientific .journals. Reports
	Electronic references websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of .the learning opportunities available. It must be linked to the programme description

Al-Musayyab Technical Institute	19- Educational institution
Department of Plant Production Technologies	20- Scientific Department / Center
Plant diseases	21- Course Name/Code
My presence in the classroom and laboratories	22- Available attendance forms
First semester (autumn) / second	23- Chapter/Year
hours 60	24- Number of study hours (total)
2024/28/2	Date of preparation of .7 this description

Course Objectives .8
• :General objective ,Introducing the student to the most important plant diseases that affect crops vegetables and orchards in terms of symptoms, method of spread and prevention of .diseases • Special objective: :The student will be able to .Diagnoses diseases caused by viruses, nematodes, and element deficiencies -1 .Knowledge of parasitic flowering plants -2 .Developing the best means to prevent diseases -3
Course name
A.M. Hamed Abdul Zaid Saud

Teaching, learning and assessment strategies -9

.Strategy: Use the whiteboard as a means to clarify and explain the material using pen

Colorful and charts

Conducting laboratory experiments in the pathology laboratory and observation in .fields and farms

A- Cognitive objectives

.A1- Teaching students how to deal with plant diseases

A2- Enabling the student to know how to deal with laboratory materials and . equipment

. B - Course specific skill objectives

B1- Providing the student with the necessary skills to conduct laboratory tests .related to plant diseases

C- Emotional and value-based goals

.A1- Enabling the student to apply theoretical information in a practical way

A2- Developing the national spirit among students to increase production in terms of .quantity and quality

A3- Instilling the concept of community service and the best way to deal with .simple segments of society, such as farmers and peasants

.transferable skills (other skills related to employability and personal development)

D1- Entering programs

Teaching and learning methods -10

(Lecture, laboratory, methodical training, summer training)

,Giving theoretical and practical lectures through display screens, PowerPoint, slides microscopes, plant sample examination experiments, and using various laboratory .devices and equipment and a wooden canopy

Evaluation methods -11

(Oral exams, written exams, semester exams, final exams, daily assessment)

-) Conducting daily quick testsQuize .(
- .Conducting monthly exams
- .Conducting midterm and final exams

Course Structure .10

Evaluation method	Learning method	Name of unit or subject (practical)	Name of unit or subject (theoretical)	Learning outcomes Required	Watches	The week
Daily evaluation	Modern teaching methods	Methods of studying ,plant diseases studying the disease	Classification of plant diseases according to the	Cognitive skill	2 theoret + ical	the first

	for theory and practice	at the site of its appearance, studying the disease in the laboratory	pathogen, symptoms and .agent		2 practical	
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	The most important diseases caused by algae and lichens, rice serogyra	Plant diseases caused by algae, their characteristics, symptoms .and methods of control	Cognitive skill	2 theoret + ical 2 practical	Second and third
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Physiological diseases of plants, blossom end rot of tomato and rose, gummosis of .stone fruit trees	,Non-parasitic diseases ,their causes, symptoms ,nitrogen deficiency ,potassium deficiency ,phosphorus, magnesium sulfur, iron, zinc .deficiency	Cognitive skill	2 theoret + ical 2 practical	Fourth
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Mineral deficiency ,diseases (nitrogen ,potassium ,phosphorus, zinc .(boron	Supplementing the symptoms of element ,deficiency, boron manganese, copper, and .mondium	Cognitive skill	2 theoret + ical 2 practical	Fifth
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Combating one of the diseases prevalent in .the institute	Plant diseases resulting ,from irregular irrigation ,high groundwater level blossom end rot on tomato ,and watermelon fruits gummosis of stone fruit .trees	Cognitive skill	2 theoret + ical 2 practical	Sixth
Daily evaluation with notes on answering questions	Modern teaching methods for theory and practice	Training students on how to sterilize agricultural soil and seeds prepared for .planting	Methods of combating plant diseases agricultural, biological) and chemical methods ,mercury bactericides) antibiotics), plant	Cognitive skill	2 theoret + ical 2 practical	Seventh

during the lecture			breeding and .(improvement			
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Showing scientific films about the most .common diseases	Mycotoxins produced by some fungi that infect grains, fruits and .foodstuffs	Cogniti ve skill	2 theoret + ical 2 practic al	The eighth
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Diseases resulting from irregular irrigation and high .groundwater levels	Show scientific films about the most common diseases	Cogniti ve skill	2 theoret + ical 2 practic al	Ninth
Daily evaluation with notes on answering questions during the lecture	Modern teaching methods for theory and practice	Poor ventilation diseases	Mycoplasma as a plant pathogen, its characteristics, the most important diseases it causes, its symptoms, its life cycle, and methods of .resistance	Cogniti ve skill	2 theoret + ical 2 practic al	tenth
Daily evaluation with notes on answering questions during the lecture	Modern teaching) methods interactive (Media Presentati (ons	The most important diseases caused by .mycoplasma	.Plant pathogenic bacteria	Cogniti ve skill	2 theoret + ical 2 practic al	eleventh
Daily evaluation with notes on answering questions during the lecture	Modern teaching) methods interactive (Media Presentati (ons	The most important diseases caused by bacteria are bacterial wilt disease on cucurbits, and fire blight on pears and .apples	Plant viruses, virus shapes, chemical .composition of the fungus	Cogniti ve skill	2 theoret + ical 2 practic al	twelfth

Daily evaluation with notes on answering questions during the lecture	Modern teaching) methods interactive (Media Presentati (ons	The most important plant diseases caused by viruses, tomato ,mosaic disease tomato leaf curl and ,yellowing disease cucurbit mosaic disease	General diseases of viral .diseases	Cogniti ve skill	2 theoret + ical 2 practic al	thirteen th
Daily evaluation with notes on answering questions during the lecture	Modern teaching) methods interactive (Media Presentati (ons	The most important diseases caused by nematodes are slow decline disease in citrus fruits and root .knot disease	,Life cycle of nematodes parasitism and changes caused by nematodes on plant tissue	Cogniti ve skill	2 theoret + ical 2 practic al	fourtee nth
Daily evaluation with notes on answering questions during the lecture	Modern teaching) methods interactive (Media Presentati (ons	Isolation of nematodes from soil and infected plant parts (roots and .(seeds	Resistance to nematodes and the most important .diseases they cause	Cogniti ve skill	2 theoret + ical 2 practic al	fifteent h

Curriculum development plan -13
Providing the possibility of academic support in organizing - .field visits Providing an appropriate classroom environment that - .enables the teacher to diversify teaching strategies Providing information technology in the campus library - Hosting experts from outside the institute or from the work - environment for which they are preparing to benefit from their expertise in developing the course according to the actual .need of the labor market

Infrastructure -14	
Winter Vegetable Crops Textbook	Required textbooks -1

Supporting resources for each course	Main references (sources) -2
Scientific journals, as well as research, theses and dissertations of professors in the same .specialization	A- Recommended books and references (scientific (.journals, reports, etc
www.google.com website	,B - Electronic references ...websites

Course Evaluation -15 By distributing the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and .written exams, reports, etc

Learning and teaching resources .16	
.Plant Diseases - Theoretical Part Dr Majeed Mutab Diwan Dr. Ali Hussein Al-Bahadli	Curriculum books, if any
	Main References..Sources
	Supporting books and references recommended by .scientific journals. Reports
	Electronic references websites

Course Description Form

1. Course Name : Computer Applications (1)
2. Course code
3. Semester/Year : First and Second Semester/First Year
4. Date of preparation of this description : 2/14/2024

5. Available attendance forms: Lecture attendance – Computer lab	
6. / Number of study hours (total) / Number of units (total): 3 hours units 6	
7. Name of the course administrator (if more than one name is (mentioned	
: A Email Name: M. Zaid Jafar Hashim Al Zaid.Jaffar@atu.edu.iq	
8. objectives Course	
• Introducing the student to computers, their importance, their operating system, and their ,parts, preparing him to deal with the computer and training him to perform or participate in application programs in the field of .specialization • The student works on the calculator, enters data .and obtains results •	Subject objectives Academic
9. Teaching and learning strategies	
1- .Learn about the parts of the computer 2- .Learn operating system commands 3- .Identify computer control panels 4- Learn aboutPaint .	Strategy
10. Course structure	

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Definition of the calculator Generations - of the - calculator Hardware and software components	Learn the definition of a - computer generations of - computers hardware and software components	**6**	**the first**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	MS-Dos operating , system system ,concept system ,reference ,disks directories and their ,levels, files internal and external commands	Learn about MS-Dos operating system , system ,concept ,system signal ,disks directories and ,their levels files, internal and external .commands	**6**	**the second**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Internal and External commands of the operating system.	Learn about internal and external operating system commands.	**6**	**Third to twelfth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Windows operating , system system ,concept ,advantages basic ,requirements system ,operation desktop components, icon concept how to deal , with the mouse , importance	Windows operating system , the concept of the ,system ,advantages basic ,requirements operating the ,system desktop components, the concept of icons how to , deal withthe mouse the , importance	**6**	**thirteenth to twenty-seventh**

		and components of thetask bar , start , menu exit the .system Dealing with desktop ,icons dealing with components of theMy Computer icon in terms ,of disks folders files , , formatting ,disks copying files , and folders taking advantage of Cut and Paste , operations dealing with theRecycle Bin how to , delete and retrieve files.	and components of theTask Bar , theStart menu exiting the , .system Dealing with ,desktop icons dealing with the components of theMy Computer icon in terms of ,disksfolders , files, formatting disks, copying files and , folders taking advantage of theCut and Paste operations , dealing with theRecycle Bin how to , delete and retrieve files.		
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Benefit from Control Panel programs, change the desktop ,background control the ScreenSaver add and , remove programs to the Start menu.	Panel , programs change the desktop ,background control the ScreenSaver , add and remove programs to the Start menu .	**6**	**thirteenth to twenty-seventh**
Written tests Midterm exams Final exams	Lecture Workshop The laboratory Summer training	Use theRun command to execute programs directly.	Use theRun command to execute programs directly.	**6**	**thirteenth to twenty-seventh**

Daily evaluation					
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	UseWindow media player take , advantage of accessories and use the calculator.	Learn how to useWindow media player , take advantage of accessoriesand use the calculator.	**6**	**thirteenth to twenty-seventh**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Dealing with thePaint program to create, save and retrieve .drawings Dealing with Office applications. How to get help.	Learn how to use Paintto create, save and retrieve .drawings Deal with Office applications. How to get help.	**6**	**thirteenth to twenty-seventh**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	The concept of computer viruses, how to get ,infected types of viruses, how to treat and deal with them using anti-virus programs.	Learn about the concept of computer viruses, how to get infected, types ,of viruses how to treat them and deal with them using anti-virus programs.	**6**	**twenty-eighth to thirtieth**

11. Course Evaluation

,The grade is distributed out of 100 according to the tasks assigned to the student .such as daily preparation, daily, oral, monthly and written exams, reports, etc

12. Learning and teaching resources

General principles of computers	Required textbooks (methodology if any)
General principles of computers	Main References (Sources)
A collection of books in the field of computers	Recommended supporting books and references (.scientific journals, reports, etc)
View websites in this fiel	Electronic references, websites

Course Description Form

13.Course name : Democracy	
14.Course code	
15.Semester/Year : Second Semester /First Year	
16.Date of preparation of this description : 2/14/2024	
17.Available forms of attendance: Attend a lecture	
18. / Number of study hours (total) / Number of units (total): 2 hours units 2	
19. Name of the course administrator (if more than one name is (mentioned	
: Name: M.M. Munir Hadi Hussein Email muneer.hadi@atu.edu.iq	
20.objectives Course	
• Identifying the most important rights of citizens in the past, present and future, and the most .important laws that govern this • ,Identify regional charters, constitutions guarantees of respect for and protection of .human rights and the legitimate rules of law . Democracy, its concepts and types	Subject objectives Academic

21.Teaching and learning strategies	
1- . Learn about democracy and its types 2- . Learn about the concepts of democracy 3- . Understand the concept of freedoms 4- . Recognizing the right to ownership	Strategy

22 -Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	- Democracy - definition types.	Learn about - democracy - its definition its types.	**2**	**the first**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Concepts of democracy.	Learn about the concepts of democracy.	**2**	**the second**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Democracy in the Third World.	Understanding democracy in the third world .	**2**	**the third**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Democratic systems in the world.	Learn about democratic systems in the world.	**2**	**Fourth**
Written tests Midterm exams	Lecture Workshop The laboratory	The concept ,of freedoms classification	Understanding the concept of ,freedoms classifying	**2**	**Fifth**

Final exams Daily evaluation	Summer training	of public freedoms.	public freedoms.		
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Fundamental ,freedoms intellectual ,freedoms economic and social freedoms.	Identifying basic ,freedoms intellectual ,freedoms economic and social freedoms.	**2**	**Sixth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	,Freedom security and a sense of reassurance.	Learn about the freedom of security and feel reassured.	**2**	**Seventh**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom to come and go .	Learn about freedom of movement.	**2**	**The eighth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom of education.	Learn about freedom of education.	**2**	**Ninth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom of the press.	Learn about freedom of the press.	**2**	**tenth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom of assembly.	Learn about freedom of assembly.	**2**	**eleventh**
Written tests	Lecture Workshop	freedom of association	Learn about freedom of association	**2**	**twelfth**

Midterm exams Final exams Daily evaluation	The laboratory Summer training				
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom of work.	Learn about freedom of work.	**2**	**thirteenth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Right of ownership.	Recognizing the right to ownership.	**2**	**fourteenth**
Written tests Midterm exams Final exams Daily evaluation	Lecture Workshop The laboratory Summer training	Freedom of trade and industry.	Learn about freedom of trade and industry.	**2**	**fifteenth**

23 -Course Evaluation

,The grade is distributed out of 100 according to the tasks assigned to the student .such as daily preparation, daily, oral, monthly and written exams, reports, etc

24- Learning and teaching resources

General principles of democracy	Required textbooks (methodology if any)
General principles of democracy	Main References (Sources)
A collection of books on democracy	Recommended supporting books and references (scientific journals, reports, etc.)
View websites in this field	Electronic references, websites

Course Description Form

Course Name : Computer Applications (2)	
Course code	
Semester/Year : First Semester/ Second Year	
of preparation of this description : 2/19/2024	
Available forms of attendance: Attend a lecture	
Number of study hours (total) / Number of units (total): 3 hours / 3 units	
Name of the course administrator (if more than one name is (mentioned	
: Name: Ms. Dalal Imran Hamza Email Dalal.Hsamza@atu.edu.iq	
objectives Course	
• Introducing the student to computers, their importance, their operating system, and their parts ,preparing him to deal with the computer, and training him to perform or participate in application programs in the field of specialization.	Subject objectives Academic
Teaching and learning strategies	
• The student works on the calculator, enters data and obtains results.	Strategy
Course structure	

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
Written tests Midterm exams Final exams Daily evaluation	Computer Center	The concept of networksand their types, the Internet and how to operate it, the main ,screen connecting to the World WideWeb , benefiting from global search engines such as Yahoo & Google and , ways to access .information	the Learn about concept of networks and their types, the Internet and how to operate it, the ,main screen connecting to the World Wide Web benefiting , from global search engines such asYahoo & Google and , ways to access .information	3	3-1
Written tests Midterm exams Final exams Daily evaluation	Computer Center	Excel spreadsheet , program ,specifications features, how ,to operate main screen and its ,components drop-down lists, cell and types of input .data	Get to know Excel spreadsheet , program ,specifications features, how to operate, main screen and its ,components ,drop-down lists cell and types of .input data	3	14-4
		Save and retrievethe worksheet , close the ,program retrieve the file, enter data and perform simple ,calculations adjust and format data .within the cell	Learn how to save and retrieve aworksheet , close the ,program ,retrieve the file enter data and perform simple ,calculations adjust and format data .within the cell		

		Methods of collecting and ,sorting data using some mathematical functions such asMax, Min, Sum, Count, Sqrt	how to Learn collect and sort data, use some mathematical functions such asMax, Min, Sum, Count, Sqrt		
		Performing cell editing ,operations copying and ,moving data copying ,calculations the concept of relative and absolute cells , using formatting tools to control ,cell operations dealing with charts, converting numerical and text data into .charts	Learn how to perform cell editing operations, copy ,and move data copy calculations, the concept of relative and absolute cells , use formatting tools to control ,cell operations deal with charts, and convert numeric and text .data into charts		
		Add and delete rows and columns in the ,worksheet print numerical .data and charts	Learn how to add and delete rows and columns in a worksheet, print numerical data .and charts		
Written tests Midterm exams Final exams Daily evaluation	Computer Center	SPSS statistical , program operation, data ,analysis steps main screen ,components ,data entry saving and retrieving, data sorting and ,switching specifying the statistical .procedure	Get to know SPSS statistical , program operation, data ,analysis steps main screen ,components ,data entry saving and retrieving, data sorting and ,switching specifying the	3	30-15

			statistical .procedure		
		Inserting Variable ,Case Analysis and , Descriptive .Statistics Statistical Summary of Data, Reports for Columns .and Rows	Learn about variable , inclusioncase , analysis and descriptive .statistics Statistical summary of data Summary , reports for columns and .rows		
		CompareMean Compare , ,Variables Correlate , Regression .	Get to know CompareMean , Compare ,Variables Correlate , Regression .		
		Quality Control Panel , applications dealing with charts, dealing with commands :such as Summarize, Custom table, Anova models, Non-parametric methods .	Quality Control panel , applications dealing with charts, dealing with commands :such as Summarize, Custom table, Anova models, Non-parametric methods .		

Course Evaluation
,The grade is distributed out of 100 according to the tasks assigned to the student .such as daily preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources	
General principles of computer applications (2)	Required textbooks (methodology if any)
General principles of computer applications (2)	Main References (Sources)
A collection of books in the field of computer applications (2)	Recommended supporting books and ,references (scientific journals, reports (.etc
View websites in this field	Electronic references, websites

Course Description Form

Course Description

This course description provides a concise summary of the main characteristics ,of the course and the learning outcomes expected of the student demonstrating whether he has made the most of the available learning .opportunities and must be linked to the programme description

Middle Euphrates Technical University - Al-Musayyab Technical Institute	**1. Educational institution**
Department of Plant Production Technologies	**2. Scientific Department/Center**
- Baath Party CrimesBaath Party Crimes	**3. Course Name/Code**
My presence	**4. Available attendance forms**
annual	**5. Chapter/Year**
30 = 30 * 1	**6. Number of study hours (total)**
2023 - 12 - 27	**7. Date this description was prepared**
M.M. Mustafa Ahmed Abd Mustafa.abid@atu.edu.iq	**8. Subject teacher**
Course objectives	
: **General objective:** Qualifying the student to be able to .Learn about local and international laws that deal with human rights issues	
:**Special objective:** The student will be able to To be able to identify the types of crimes committed within the country and distinguish between them. Between them and crimes against humanity	

Course outcomes , teaching , learning and assessment methods

Cognitive objectives

1. To raise the level of awareness of the student
2. .The student should learn about rights and laws
3. The student should get to know the system of the country to which he belongs or .outside it

Course Skill Objectives

1. To acquire the skill to distinguish between crimes
2. To acquire skill in knowing the laws of the International Criminal Court
3. To know the crimes committed against humanity

and learning methods

(Lectures, Laboratories, workshops, training Summer, projects)

Evaluation methods

1. oral exams
2. Daily exams
3. Monthly exams
4. Final exams

and value goals

1. Developing the student's personality
2. Encouraging the student to dialogue
3. Motivating students to participate in work groups that develop teamwork
4. Equipping the student with sufficient information about teamwork

and learning methods

(Lectures, Laboratories, workshops, training Summer, projects)

Evaluation methods

1. oral exams
2. Daily exams
3. Monthly exams
4. Final exams

and transferable skills (other skills related to employability and personal development

1. Developing the student to think in a purely geometric way
2. Developing the student's knowledge of electronic medical devices and how to deal with them

Course structure					
Evaluation method	**Teaching method**	**Unit name/topic**	**Required learning outcomes**	**Watches**	**The week**
Daily exam + Monthly exam	a lecture	Definition of crimes	Concept and definition of crimes and their types	**2**	**1**
Daily exam + Monthly exam	a lecture	The most important decisions issued by the Supreme Criminal Court	Position of the Iraqi High Criminal Court Law of 2001 2005	**2**	**2**
Daily exam + Monthly exam	a lecture	international crimes	Types of international crimes	**2**	**3**
Daily exam + Monthly exam	a lecture	The role of the Baath regime	The role of the Baath regime in psychological violations and their consequences	**2**	**4**
Daily exam + Monthly exam	a lecture	The violative role of the Baath Party	The role of the Baath regime in psychological violations and their consequences	**2**	**5**
Daily exam + Monthly exam	a lecture	System position	The Baath regime's position on religion and religious institutions	**2**	**6**
Daily exam + Monthly exam	a lecture	The role of the Baath regime	The role of the Baath regime in violating human rights laws	**2**	**7**
Daily exam + Monthly exam	a lecture	Violations	and military violations of the Baath regime	**2**	**8**
Daily exam +	a lecture	Baath regime environmental violations	Baath regime environmental violations	**2**	**9**

Monthly exam					
Daily exam + Monthly exam	a lecture	War pollution	Iraq / War Pollution	**2**	**10**
Daily exam + Monthly exam	a lecture	destroy cities	Baath regime environmental violations in Iraq destroying cities	**2**	**11**
Daily exam + Monthly exam	a lecture	Baath regime violations	Drying the marshes	**2**	**12**
Daily exam + Monthly exam	a lecture	Legal conditioning	and Sharia Conditioning of the Crime of Mass Graves	**2**	**13**
Daily exam + Monthly exam	a lecture	mass graves	The role of the regime in the mass graves in Iraq	**2**	**14**

9. Infrastructure	
methodical book	**1. Required Textbooks**
Websites	**2. Main References (Sources)**
research and journals in the field of specialization	**Recommended books and references ,scientific journals) (...reports**
Universities and institutes websites And specialized research centers	**Electronic references, websites**

Curriculum Development Plan
.Search for the latest scientific developments on this topic

Course Description Form

Course name/ English language/ Theoretical/ Second stage
Course code
Chapter / Year/ First Second Semester & Semester
Date of preparation of this description: 2024-2-23
/ Available attendance formsIn person-
Number of study hours (total) (2) / Number of units (2)
Name of the course administrator (if more than one name is (mentioned
Name: : Zaid Taleb Shamran zaid.shamran@aut.edu.iq
objectives Course
Subject objectives **,Providing the student with information that enables him to know the types of nurserie planning and preparing the nursery, propagating plants using various sexual and .vegetative methods, and learning about the importance of productive forests .Preventive and touristic activities and training students to use the English language** •
Teaching and learning strategies
Strategy **Education Strategies** **It includes a set of general rules and outlines that concern the means of achieving the desired goals of teaching through advance planning and setting future plans for each of (presentation - coordination - training - discussion) and organizing the classroom environment and classroom management for the purpose of developing .students' education**

Learning strategies

It includes the behaviors and actions that students engage in that are intended to .influence how they learn

Through it, you can process information and learn different tasks, and learning is strategic when

Students are aware of the specific skills and strategies (procedures and methods) they .use in learning

Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
exam	My presence	**Tenses** Present, past, future p6-8 **Questions** **Questions words** *Wh o ... ?, Why ... ?, How m ... ?* p7	2	First week	
exam	My presence	**Present tenses** Present Simpl Present Continuous *have/have got*	2	The second week	
exam	My presence	**Past tenses** Past Simple Past Continuou	2	The thirdweek	
exam	My presence	**Quantity** **Articles**	2	Week 4	
exam	My presence	**Verb patterns** **Future intentions**	2	Week 5	
exam	My presence	**What's it like?** **Comparative and superlative adjectives**	2	Week6	
exam	My presence	**Present Perfect and Past Simple** ***for* and *since*** **Tense revision**	2	The seventhweek	
exam	My presence	***have** (got) to* ***should*** ***must t***	2	Week 8	
exam	My presence	**Time and conditional clauses**	2	Week 9	
exam	My presence	**Verb patterns 2** **Infinitives**	2	The tenthweek	
exam	My presence	**Passives**	2	Week eleven	
exam	My presence	**Second conditional**	2	twelfth week	

exam	My presence	Present Perfect Continuous Present Perfec Simple versus Continuous		2	thirteenthweek
exam	My presence	Past Perfect Reported statements		2	Fourteenthweek
exam	My presence			2	Week 15

Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources

New Headway Pre-Intermediate student's book	Required textbooks (methodology if any)
	Main References (Sources)
	Recommended supporting books and references (.scientific journals, reports, etc)
	Electronic references, websites

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the .most of the available learning opportunities and linking them to the program class

Al-Musayyab Technical Institute	**20. Educational institution**
Department of Plant Production Technologies	**21. Scientific Department / Center**
Forage and pasture crops	**22. Course Name/Code**
Lecture	**23. Available attendance forms**

quarterly	24. semester/year
76	25. Number of study hours (total)
2024/2/	Date of preparation of this .7 description

Course objectives .8

10- .Preparing and preparing the land for cultivation .

11- .The appropriate stage for cutting plants and presenting them to the animal

12- .Exploitation of natural pastures and methods of improving them

13- .Preparation of feed mixtures

Name of the course administrator .8

M.D. Auras Mohsen Kazem

Teaching, learning and assessment strategies

أ- Cognitive objectives

ب- .Cultivation and service of forage crops

ت- .The appropriate stage for cutting plants and presenting them to the animal

ث- .Exploitation of natural pastures and grazing methods

B – Course specific skill objectives

.Providing the student with skills to apply scientific methods regarding forage crops –1

Training the student to produce crops using appropriate breeding methods to achieve high –2
.productivity

Teaching and learning methods

(**Lecture**, **laboratory**, **methodical training**, **summer training**)

Evaluation methods

(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)

ج- Affective and value–based goals

.Enabling the student to apply theoretical information in a practical way –1

.Developing the national spirit among students to increase production in terms of quantity and quality –2

,Instilling the concept of community service and the best way to deal with simple segments of society –3
.such as farmers and peasants

Developing the ethics of the agricultural engineering profession among students by following the –4
.correct professional behavior

Teaching and learning methods

,Practical and theoretical lectures, **laboratory**, **scientific films**, **agricultural facility**, **scientific visits**)
(**systematic field training**, **summer training**

,**Providing theoretical and practical lectures through projectors**, **PowerPoint presentations**, **slides microscopes**, **plant sample examination experiments**, **and the use of various laboratory devices and .equipment and a wooden canopy**

Evaluation methods

(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)

-) **Conducting quick daily tests Quize** .(
- .**Conducting monthly exams**

.**Conducting midterm and final exams**

.**D – General and transferable skills** (**other skills related to employability and personal development**)

D1– Entering programs

22. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Written exam	Lecture	General evaluation of coarse and concentrated plant .feed materials Nutritional value of .plant feed materials	My knowledge and skills	5 = 3+2 hours	1
Written exam	Lecture	Morphological study and diagnosis of the :following crop seeds barley, oats, Sudan grass, millet, white and yellow sorghum, broad ,beans, clover hartaman, soil preparation, and modification of the plates designated for .cultivation	My knowledge and skills	5 = 3+2 hours	2
Written exam	Lecture	The importance of conducting experiments and research in the field of fodder crop production and natural ,grazing areas explaining a plan for planting summer fodder crops in the field designated for them, preparing the .soil (continuation)	My knowledge and skills	5 = 3+2 hours	3
Written exam	Lecture	Cultivation of the observation field with .forage crops	My knowledge and skills	5 = 3+2 hours	4

Written exam	Lecture	Botanical description of the gypsum, its types and groups, the use of fodder crops in animal ,nutrition (mowing ,(grazing, preservation and completion of the remaining field .operations	My knowledge and skills	5 = 3+2 hours	5
Written exam	Lecture	Botanical description of clover, its type, and the use of clover in animal feed ,harvesting, grazing) .(and preserving it	My knowledge and skills	5 = 3+2 hours	6
Practical evaluation	Practical lecture	Botanical description :of the following crops ,hartaman, kakooz ,kashoun, peas, fodder karat, and the exploitation of these .crops in animal feed	My knowledge and skills	5 = 3+2 hours	7
Practical evaluation	Practical lecture	Botanical description of the following fodder crops, yellow and ,white corn exploitation of these ,crops in animal feed presentation of .scientific films	My knowledge and skills	5 = 3+2 hours	8
Practical evaluation	Practical lecture	Botanical description ,of Sudan grass, millet ,barley, and oats exploitation of these ,crops in animal feed .field follow–up	My knowledge and skills	5 = 3+2 hours	9

Practical evaluation	Practical lecture	Manufacture of green ,fodder as hay preparation of work ,requirements manufacture of fodder as hay using natural .and industrial methods	My knowledge and skills	5 = 3+2 hours	10
Practical evaluation	Practical lecture	Manufacture of green fodder as silage, steps ,for preparing silage preparing work requirements, showing .a scientific film	My knowledge and skills	5 = 3+2 hours	11
Practical evaluation	Practical lecture	'Discussing students reports on their observations, holding .seminars	My knowledge and skills	5 = 3+2 hours	12
Practical evaluation	Practical lecture	Scientific visit	My knowledge and skills	5 = 3+2 hours	13
Written exam	Lecture	Collect and preserve specimens of forage plants, display .preserved specimens	My knowledge and skills	5 = 3+2 hours	14
Written exam	Lecture	,Productivity per acre animal load, estimating the productivity of fodder per acre and calculating it .mathematically	My knowledge and skills	5 = 3+2 hours	15

23. The structure of the course

Methodological Forage Crops Book, Course Kit	Required textbooks –1
Textbooks taught in corresponding colleges and universities	Main references (sources) –2

Foreign and Arab references on protected agriculture	**A– Recommended books and refe ences (.scientific journals, reports, etc)**
Searching websites in agricultural sciences	**…B – Electronic references, websit s**

24. Course Evaluation	
By distributing the grade out of 100 according to the tasks assigned to the student, such as daily .preparation, daily, oral, monthly and written exams, reports, etc	
Learning and teaching resources .13	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references recomme ded .by scientific journals. Reports
	Electronic references and websites

Course Description Form

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the available learning .opportunities. This must be linked to the program description

Al-Musayyab Technical Institute	**1.** Educational institution

Department of Plant Production Technologies	**2.** Scientific Department / Center
plant protection	**3.** Course Name/Code
Lecture	**4.** Available attendance forms
quarterly	**5.** semester/year
75	**6.** Number of study hours (total)
/2/2024	Date of preparation of this description .7

Course objectives .8

1- **Introducing the student to the economic importance of insects**

2- **Introducing the student to the economic importance of plant diseases caused by**

3- **,Introducing the student to the economic importance of birds, their harms, characteristics .and methods of reproduction**

4- **Introducing the student to the economic importance of rodents and methods of controlling them**

Name of the course supervisor : **Mr. Karim Abdul Hussein Radam** .8

Teaching, learning and assessment strategies

A- Cognitive objectives

A1- **Introducing the student to the economic importance of insects, their methods of reproductio, and .means of controlling them**

.Introducing the student to the methods of insect reproduction –2

.**Introducing the student to the ways in which plant diseases spread –3**

Introducing the student to the importance of the plant protection program and the cognitive meth ods –
.of the program

.B – The skill objectives of the course

B1 – Providing the student with cognitive skills to identify insects, their genera, types, and methods of reproduction
.and livelihood

Training the student on methods of obtaining special samples. Insect reproductive stages (eggs, larvae, pupae or –2
(nymphs and adults

Teaching and learning methods

(Lecture, laboratory, methodical training, summer training)

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C– Emotional and value–based goals

1- **.Enable the student to apply theoretical and practical knowledge in the field**

2- **Developing the national spirit among students to increase production in quantity and quality**

3- **Developing the ethics of the engineering assistant profession among students by following the**
.correct professional behavior

4- **,Instilling the concept of community and the best way to deal with simple segments of society**
.such as farmers

Teaching and learning methods

Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits, systematic field)
(training, summer training

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

Conducting daily pre– and post–tests

Conducting monthly exams

Conducting midterm and final exams

.D – General and transferable skills (other skills related to employability and personal development)

D1– Entering programs

10. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	v
Written exam	Lecture	**.The harms and benefits of insects**	**a lecture**	5 = 3+2 hours	**1**
Written exam	Lecture	**Factors for the success and spread of .insects in nature**	**a lecture**	=	**2**
Written exam	Lecture	**Reproduction and growth – methods .of insect reproduction**	**a lecture**	=	**3**
Written exam	Lecture	**.Types of nutrition in insects**	**a lecture**	=	**4**
Written exam	Lecture	**.Environments in which insects live**	**a lecture**	=	**5**

Written exam	Lecture	.**The harms and benefits of insects**	**Practical lecture**	=	6
Practical evaluation	Practical lecture	**External appearance of insects – body ,wall, body regions of the insect, head head appendages, antennae and their .modifications, eyes**	**Practical lecture**	=	7
Practical evaluation	Practical lecture	,Mouth parts and their modifications ,thorax in insects, thoracic appendages legs and their modifications, wings and .their modifications	**Practical lecture**	=	8
Practical evaluation	Practical lecture	The abdomen in insects - abdominal .appendages	**Practical lecture**	=	9
Practical evaluation	Practical lecture	Transformation in insects - types of larvae .types of pupae -	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Principles of insect classification and their position in the animal kingdom - the most important animal phyla and their .characteristics	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Order of the dream - General - characteristics - External appearance The most important factors harmful to .plants	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Rodents - external appearance - the most .important species spread in Iraq	**Practical lecture**	=	1
Written exam	Lecture	Birds - species harmful to agricultural crops - the most important species spread .in Iraq	**Practical lecture**	=	1
Written exam	Lecture	Some laboratory instructions - equipment and tools for the plant pathology laboratory - installation of the light microscope - practical application on the .equipment and its maintenance	**Practical lecture**	=	1

11. The structure of the course	
Plant Protection Fundamentals Book, Course Kit	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on plant protection	A- Recommended books and referenc es (.scientific journals, reports, etc)
Searching websites in agricultural sciences	...B - Electronic references, websites

12. Course Evaluation	
,By distributing the grade out of 100 according to the tasks assigned to the student, such as daily preparation, d aily .oral, monthly and written exams, reports, etc	
Learning and teaching resources .13	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references recommended b y .scientific journals. Reports
	Electronic references and websites

Course Description Form

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the available learning .opportunities. This must be linked to the program description

Al-Musayyab Technical Institute	**7.** Educational institution
Department of Plant Production Technologies	**8.** Scientific Department / Center
General insects	**9.** Course Name/Code
Lecture	**10.** Available attendance forms
quarterly	**11.** semester/year
75	**12.** Number of study hours (total)
/2/2024	Date of preparation of this description .7

Course objectives .8

5- **Introducing the student to the economic importance of insects in general**

6- **Introducing the student to the economic importance of the life cycle of insects harmful to .plants**

7- **Introducing the student to the economic importance of some insects and their use in .biological control**

8- **Introducing students to alternative insect control methods**

Name of the course supervisor : **Mr. Karim Abdul Hussein Radam** .8

Teaching, learning and assessment strategies
A- Cognitive objectives A1- **Introducing the student to the economic importance of insects, their methods of reproductio, and .means of controlling them** **.Introducing the student to the methods of insect reproduction –2** **.Introducing the student to the ways in which plant diseases spread –3** **Introducing the student to the economic importance of insects and identifying alternative method of – .agriculture**
.B - The skill objectives of the course B1 - Providing the student with cognitive skills to identify insects, their genera, types, and methods of reproduction .and livelihood Training the student on methods of obtaining special samples. Insect reproductive stages (eggs, larvae, pupae or -2 (nymphs and adults
Teaching and learning methods
(Lecture, laboratory, methodical training, summer training)
Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment)
C- Emotional and value-based goals **5- .Enable the student to apply theoretical and practical knowledge in the field** **6- Developing the national spirit among students to increase production in quantity and quality** **7- Developing the ethics of the engineering assistant profession among students by following the .correct professional behavior**

8- ,**Instilling the concept of community and the best way to deal with simple segments of soc ety .such as farmers**
Teaching and learning methods
Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits, systematic fie d) (training, summer training
Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment) **Conducting daily pre– and post–tests** **Conducting monthly exams** **Conducting midterm and final exams**
.D – General and transferable skills (other skills related to employability and personal development) D1– Entering programs

13. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	v
Written exam	Lecture	The development of pest control, an overview of the development and stages of agricultural pest control, and the	**a lecture**	5 = 3+2 hours	**1**

		reasons that led to the pest control .program			
Written exam	Lecture	The life and environment of insects and the foundations of their control, the .economic limits of insects in nature	**a lecture**	=	2
Written exam	Lecture	,Methods of pest control, natural control ,definition, factors, weather factors .geographical factors, natural enemies	**a lecture**	=	3
Written exam	Lecture	Natural pest control, physical and .mechanical control	**a lecture**	=	4
Written exam	Lecture	Completing applied control, secondary control, agricultural quarantine and its objectives, biological control, its benefits and advantages, the most important .parasites and predators common in Iraq	**a lecture**	=	5
Written exam	Lecture	Chemical pest control, classification of chemical pesticides according to the type of pest and the method of entry into the insect's body, their chemical composition, problems of expanding the .use of chemical pesticides	**Practical lecture**	=	6
Practical evaluation	Practical lecture	Modern trends in pest control, bacterial control, use of hormones in control, use .of pheromones in control	**Practical lecture**	=	7
Practical evaluation	Practical lecture	Integrated pest management, its elements and benefits, some practical examples of .integrated pest management	**Practical lecture**	=	8
Practical evaluation	Practical lecture	The most important pests of greenhouses .in Iraq and ways to combat them	**Practical lecture**	=	9
Practical evaluation	Practical lecture	,Cotton pests, cotton spiny bollworm scientific name, order, family, description of the insect, its life cycle, damage caused .by it, control	**Practical lecture**	=	1

Practical evaluation	Practical lecture	Pests of wheat and barley, the most ,important pests that affect the two crops .a detailed study of the Sunna insect	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Corn pests, the most important corn pests, a detailed study of the corn stalk .borer	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Pests of the Asteraceae and Cruciferae families, a detailed study of the sugar beet .borer	**Practical lecture**	=	1
Written exam	Lecture	Legume pests, the most important pests that affect the legume family, a detailed .study of the black bean aphid	**Practical lecture**	=	1
Written exam	Lecture	Stored goods pests, sources of insect infestation in stores, conditions suitable ,for their spread, symptoms of infestation .methods of preventing economic insects	**Practical lecture**	=	1

14. The structure of the course

The Book of General Insects	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on general insects	A- Recommended books and referenc es (.scientific journals, reports, etc)
Searching websites in agricultural sciences	...B - Electronic references, websites

15. Course Evaluation

,By distributing the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily .oral, monthly and written exams, reports, etc

Learning and teaching resources .13	
	Curriculum books, if any
	Main References..Sources
	Supporting books and references recommended by .scientific journals. Reports
	Electronic references and websites

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the available learning .opportunities. This must be linked to the program description

Al-Musayyab Technical Institute	**13.** Educational institution
Department of Plant Production Technologies	**14.** Scientific Department / Center
beekeeping	**15.** Course Name/Code
Lecture	**16.** Available attendance forms
quarterly	**17.** semester/year
75	**18.** Number of study hours (total)
/2/2024	Date of preparation of this description .7

Course objectives .8
9- **Introducing the student to the economic importance of beekeeping**
10- **Introducing the student to the life cycle of a honeybee colony**
11- **Introducing the student to the economic importance of flower pollination for different .plants**
12- **Introducing the student to the methods of producing queen bees**
Name of the course supervisor : **Mr. Karim Abdul Hussein Radam** .8

Teaching, learning and assessment strategies

A- Cognitive objectives

.A1- **Introducing the student to the economic importance of bees for the purpose of honey produ tion**

.**Introducing the student to the methods of bee reproduction –2**

.**Introducing the student to diseases that affect bees –3**

.**Introducing the student to honey sorting methods and the process of eliminating honey crystalliz tion**

B - Course specific skill objectives : Standard selection of honeybee queens

.Training the student on methods of cell division and producing packages for the purpose of propagation or sa e -2

Teaching and learning methods

(Lecture, laboratory, methodical training, summer training)

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C- Emotional and value-based goals

9- .**Enable the student to apply theoretical and practical knowledge in the field**

10- Developing the national spirit among students to increase production in quantity and qual ty

11- Developing the ethics of the engineering assistant profession among students by following the .correct professional behavior

12- ,**Instilling the concept of community and the best way to deal with simple segments of soc ety .such as farmers**

Teaching and learning methods
Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits, systematic fie d) (training, summer training
Evaluation methods
(Oral exams, written exams, semester exams, final exams, daily assessment) **Conducting daily pre– and post–tests** **Conducting monthly exams** **Conducting midterm and final exams**
.D – General and transferable skills (other skills related to employability and personal development) D1– Entering programs

16. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	v
Written exam	Lecture	The economic importance of beekeeping, bee products, the importance .of bees in pollination	**a lecture**	5 = 3+2 hours	1
Written exam	Lecture	Life of the honeybee colony/queen, its characteristics, the conditions in which it is raised, its pollination, its life cycle, and .its functions	**a lecture**	=	2

Written exam	Lecture	/ Life cycle of the honey bee colony ,worker bee life cycle and characteristics ,male bee life cycle and characteristics .false mothers, methods of treating them	**a lecture**	=	3
Written exam	Lecture	The activity of domestic and foreign .workers	**a lecture**	=	4
Written exam	Lecture	,Types and breeds of honey bees (small (large, Indian, western	**a lecture**	=	5
Written exam	Lecture	Iraqi bee breeds, their improvement and breeding with other breeds, their hybridization with Carniolan and Egyptian bees, and specifications of the .standard breed	**Practical lecture**	=	6
Practical evaluation	Practical lecture	,Natural swarming, when it occurs ,methods of swarming, catching swarms .disadvantages of swarming	**Practical lecture**	=	7
Practical evaluation	Practical lecture	Bee queen rearing, the economic importance of raising them, specifications of the hive in which the queens are raised, types of hives used in queen .rearing	**Practical lecture**	=	8
Practical evaluation	Practical lecture	Bee queen rearing, the economic importance of raising them, specifications of the hive in which the queens are raised, types of hives used in queen .rearing	**Practical lecture**	=	9
Practical evaluation	Practical lecture	Establishing apiaries, types of apiaries, the appropriate place to establish them, the ,number of colonies in the apiary ,requirements for establishing the apiary .and the costs of establishing it	**Practical lecture**	=	1
Practical evaluation	Practical lecture	Honey bee products, chemical and physical specifications of honey, honey crystallization, honey adulteration and .methods of detection, benefits of honey	**Practical lecture**	=	1

Practical evaluation	Practical lecture	Honeybee products, chemical and ,physical properties of wax and its benefits ,royal jelly, its properties and benefits properties of propolis, bee venom, and .their benefits	**Practical lecture**	=	1
Practical evaluation	Practical lecture	.Sources of nectar and pollen in Iraq	**Practical lecture**	=	1
Written exam	Lecture	Honey bee pollination of economic plants, and how to manage honey bee colonies for the purpose of pollinating .plants	**Practical lecture**	=	1
Written exam	Lecture	The effect of chemical pesticides on honey bees, types of pesticides according to their toxicity to honey bees, protecting .bee colonies from pesticides	**Practical lecture**	=	1

17. The structure of the course

Beneficial Insects Book/Educational Kit	Required textbooks -1
Textbooks taught in corresponding colleges and universities	Main references (sources) -2
Foreign and Arabic references on beneficial insects	A- Recommended books and referenc es (.scientific journals, reports, etc)
Searching websites in agricultural sciences	...B - Electronic references, websites

18. Course Evaluation

,By distributing the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily .oral, monthly and written exams, reports, etc

Learning and teaching resources .13

	Curriculum books, if any Main References..Sources Supporting books and references recommended by .scientific journals. Reports Electronic references and websites

Course Description

This course description provides a concise summary of the main course features and the learning outcomes expected of the student, demonstrating whether the student has made the most of the available learning .opportunities. It must be linked to the program description

Al–Musayyab Technical Institute	**1. Educational institution**
Department of Soil and Water Technologies	**2. Scientific Department / Center**
Soil fertility and fertilization	**3. Course Name/Code**
Direct – Mandatory	**4. Available attendance forms**
My semester – Spring semester	**5. semester/year**
hours 60	**6. Number of study hours (total)**

2024	**7. Date this description was prepared**

:Course objectives .8

Teaching the student the basics of fertility science, major and minor elements, symptoms of .deficiency and excess, their effect on soil and plants, and treatment by adding fertilizers

Course outcomes, teaching, learning and assessment methods .9

.B - Course specific skill objectives

Estimation of nitrogen element in soil .1

.Estimation of available nitrogen in the plant .2

Estimation of available phosphorus and potassium in the soil .3

Plant analysis .4

Teaching and learning methods

.Scientific lecture .1

.Discussion between students .2

.Prepare reports on the lecture .3

Evaluation methods

Daily exams .1

Ask some questions .2

Giving homework .3

C- Emotional and value-based goals

Benefit from the scientific material in understanding the course of events .1.

Ability to deal with emergency situations .2.

Choosing the best solution from among the available solutions and options .3.

The ability to lead and face challenges .4.

.Developing students' abilities to analyze the content of social variables to identify thinking skills .5 And problem solving skills.
Teaching and learning methods Lectures, identifying and diagnosing problems through explanation, exercises and classroom drills, practical applications to enable students to understand how to benefit from the specifications used and understand their application.
Evaluation methods ,Direct questions, daily exams, motivating students and encouraging them to participate actively discussion in .Lectures, extracurricular activities, semester exams, and in-person attendance
D - General and transferable skills (other skills related to employability and development) .(Personal .Improve their intellectual skills .1 .Raising their conceptual awareness and moving the student from the stage of education to learning .2 .Tendency to cooperate and teamwork .3

Course structure .10

Evaluation method	**Teaching method**	**Name of unit or topic**	**Required learning outcomes**	**watches**	**week**
Questions and Answers	**Continuous orientation**	The World Food Production Problem: A New Look	**Identifying the food problem**	**4**	**the first**

	of students by the professor during the lecture				
Asking questions	Lecture and discussion	Soil, its components, its nutrient content, and the factors affecting .it	**Learn about soil, its types and its elemental content**	**4**	**the second**
Listening Asking questions	Lecture and discussion	Factors affecting nutrient absorption	**Identifying influencing factors**	**4**	**the third**
Case study	Lecture and discussion	Mechanisms of absorption of nutrients: diffusion, bulk interference, carrier	**Understanding absorption mechanisms**	**4**	**Fourth**
Case studies	Dialogue and criticism	Energy and energy absorption and energy sources for the absorption of these elements	**Identify energy sources**	**4**	**Fifth**
Mini-lesson discussion	Lecture and discussion	Macronutrients. Nitrogen, its sources, absorption, and .deficiency symptoms	**Identify the major elements**	**4**	**Sixth**
Case study	Discussion and mini-lesson	Increased chemical nitrogen loss in Iraqi soils, volatilization of ammonia, nitrogen cycle in nature	**Identify the element nitrogen**	**4**	**Seventh**
Listening and asking questions	Lecture and discussion	Phosphorus sources, ready and unavailable form, phosphorus in soil solution, phosphorus fixation	**Identify the element phosphorus**	**4**	**The eighth**
Listening and asking questions	Lecture and discussion	:Phosphate fertilizers in Iraqi soils problems of fixation and treatments	**Identify phosphate fertilizers**	**4**	**Ninth**

Case study	Lecture and critique	Potassium phosphate, potassium phosphate balance, potassium behavior in Iraqi soils, potassium fertilizers	**Learn about potassium**	**4**	**tenth**

Evaluation method	**Teaching method**	**Name of unit or topic**	**Required learning outcomes**	**watches**	**week**
Questions and Answers	Lecture and discussion	,Calcium, its forms, importance and symptoms of deficiency and excess. Magnesium, its importance, deficiency and excess .symptoms	**Learn about calcium, its importance, and magnesium**	**4**	**eleventh**
Asking questions	Lecture and discussion	Sulfur cycle image, deficiency and excess symptoms, trace ,elements, iron, its importance confiscation, and methods of adding it	**Identify sulfur and trace elements**	**4**	**twelfth**
Listening Asking questions	Lecture and discussion	,Copper, its importance deficiency symptoms, and fertilization. Manganese, factors ,affecting it, its importance .deficiency symptoms	**Identifying the slave trader and the magnate**	**4**	**thirteent**
Listening Asking questions	Lecture and discussion	Boron, factors affecting it, its ,importance, boron fertilizers zinc, its importance, symptoms of zinc fertilizer deficiency	**,Learn about boron its importance, and zinc**	**4**	**fourteen**
Listening Asking questions	Dialogue and criticism	,Organic matter, its sources importance, and humus and its features	**Identify organic matter and humus**	**4**	**fifteenth**

:**Infrastructure .11**	
Curriculum	**Required textbooks .1**
Muhyiddin Taha, The Book of Fertility – 1	**Main references (sources) .2**
	:**A. Recommended books and references**
Specialized websites	b. Electronic references, websites

Curriculum Development Plan .12
.Providing academic support capabilities in organizing field visits * .Providing an appropriate classroom environment that enables teachers to diversify teaching strategies * .Providing information technology in the campus library * Hosting experts from outside the institute, or from the work environment for which they are preparing, to * benefit from their experience in .Develop the curriculum according to the actual needs of the labor market

Course Description Form

Course Description

This course description provides a concise summary of the main course features and the learning outcomes expected of the student, demonstrating whether the student has made the most of the .available learning opportunities. It must be linked to the program description

Al-Musayyab Technical Institute	**Educational institution –1**
Department of Plant Production Technologies	**Scientific Department/Center –2**

Garden decoration and **engineeringFloriculture and Landscape**	**Course name/code –3**
My presence	**Available forms of attendance –4**
Spring Semester / Second Stage	**Semester/Year –5**
77 in the theoretical and practical class One hour	**Number of study hours (total) –6**
2024/2/	**Date of preparation of this .7 description**

Course objectives .8

Granting the student a diploma in the theoretical and practical aspects, which serves to prepare –1 .a graduate with a prestigious level and introduce him to the practical arena
Learn about the most important plants grown in gardens **–2**
.Carrying out service operations and propagating ornamental plants -3
.Conducting different models of gardens and the principles of distributing plants in them -4
:**Name of the course supervisor –9 M.M. Hussein Ali Hamid**

Teaching, learning and assessment strategies

.B – Course specific skill objectives

.B1 – Providing the student with skills to apply scientific methods in the field of decoration and garden engineering

Teaching and learning methods

(**Lecture**, **laboratory**, **methodical training**, **summer training**)

Evaluation methods

(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)

C– Emotional and value–based goals

.A1– Enabling the student to apply theoretical information in a practical way

A2– Developing the ethics of the agricultural engineering profession among students by following the correct .professional behavior

Teaching and learning methods

,**Practical and theoretical lectures**, **laboratory**, **scientific films**, **agricultural facility**, **scientific visits**)
(**systematic field training**, **summer training**

Evaluation methods

(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)

.**D – General and transferable skills** (**other skills related to employability and personal development**) **D1– Entering programs**

Course structure –10

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Questions and Answers	**and Lecture practical lesson**	plants Ornamental and ,landscape design classification of ornamental plants and .their importance	My knowledge and skills	**5 = 3+2 hours**	**1**
Written exam	**and Lecture practical lesson**	Trees and shrubs (their importance, their uses in landscaping, tree and shrub products, their distinction from (herbaceous plants	My knowledge and skills	**=**	**2**
Asking questions	**and Lecture practical lesson**	Hedges and climbers their importance and uses) in landscaping, hedge and climber products, their (distinction from grasses	My knowledge and skills	**=**	**3**
Written exam	**and Lecture practical lesson**	Flower bulbs (importance of bulbs, suitable environmental conditions, bulb storage .and care processes	My knowledge and skills	**=**	**4**
Written exam	**and Lecture practical lesson**	Ornamental herbaceous plants (classification of ornamental herbaceous plants, suitable flowers in ,garden design classification of clematis .(and carnation plants	My knowledge and skills	**=**	**5**
Written exam	**and Lecture practical lesson**	Medicinal and aromatic .plants	My knowledge and skills	**=**	**6**
Practical evaluation	**and Lecture practical lesson**	Shade plants and interior .design	My knowledge and skills	**=**	**7**

Practical evaluation	**and Lecture practical lesson**	Aquatic and semi-aquatic plants Cacti and succulents (definition of aquatic and semi-aquatic plants, cacti and their uses, classification of cacti and succulent plants according to their shapes and growth patterns and .(their use in landscaping	My knowledge and skills	**=**	**8**
Practical evaluation	**and Lecture practical lesson**	Green spaces (definition ,of green spaces importance and use, types of turf common in ,gardens, division maintenance of green .(spaces	My knowledge and skills	**=**	**9**
Practical evaluation	**and Lecture practical lesson**	Gardens and basic design systems, (a historical overview of the spread of gardens / the importance of gardens, methods of garden design, the historical development of garden engineering and .(design	My knowledge and skills	**=**	**10**
Practical evaluation	**and Lecture practical lesson**	Planning elements general rules for) landscaping) The basic planning elements include ,simplicity , unity, balance proportions, and /complexity, and isolation . garden structures	My knowledge and skills	**=**	**11**
Practical evaluation	**and Lecture practical lesson**	Landscaping with special characteristics (botanical gardens, zoological	My knowledge and skills	**=**	**12**

		gardens, square and street (gardens			
Practical evaluation	**and Lecture practical lesson**	Stages of garden design and implementation (the stage of comprehensive ,survey of the garden identifying problems and solutions, learning how to plan and implement .(gardens	My knowledge and skills	**=**	**13**
Written exam	**and Lecture practical lesson**	Stages of garden design and implementation (the stage of comprehensive ,survey of the garden identifying problems and solutions, learning how to plan and implement (gardens	My knowledge and skills	**=**	**14**
Written exam	**and Lecture practical lesson**	.Showing scientific films	My knowledge and skills	**=**	**15**

The curriculum structure –11	
Architecture Methodology Book , Course Kit	**Required textbooks –1**
Textbooks taught in corresponding colleges and universities	**Main references (sources) –2**
Foreign and Arabic references on decoration and garden engineering	**A– Recommended books and refe ences (.scientific journals, reports, etc)**

Searching websites in agricultural sciences	…B – Electronic references, websites

Course Evaluation –12

By distributing the grade out of 100 according to the tasks assigned to the student, such as daily .preparation, daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .13

	Curriculum books, if any
	Main References..Sources
	Supporting books and references recommended .by scientific journals. Reports
	Electronic references and websites

Course Description Form

Course Description

Al–Musayyab Technical Institute	**26. Educational institution**
Department of Plant Production Technologies	**27. Scientific Department / Center**
Arabic	**28. Course Name/Code**
Lecture	**29. Available attendance forms**
quarterly	**30. semester/year**
78	**31. Number of study hours (total)**

2024/2/	Date this description was .7 prepared

Course objectives .8

14- development spirit pride In the language Arabic

15- Developing students' language skills

16- Developing grammatical and literary skills among university students

17- Raising the level of professional and research core

Name of the course administrator .8

Dr. Tabarak Hamid Hussein Al-Tamimi

Teaching, learning and assessment strategies

A- Cognitive objectives

.A1- The student should learn the correct rules of Arabic grammar and spelling

. B – Course specific skill objectives

B1- How to formulate correct sentences and write according to correct Arabic grammar rules

Teaching and learning methods

(The lecture)

Evaluation methods
(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)
Teaching and learning methods
(**Practical and theoretical lectures**)
Evaluation methods
(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)
.**D – General and transferable skills** (**other skills related to employability and personal development**)

22. Course structure

25. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Exams Daily Weekly And seasonal And final	Lectures Paper and electronic Lectures Video on road rows Electronic	introduction on the language Arabic	Why do we study the ?Arabic language Why is the Arabic language called the language of the Qur'an? Other names for the Arabic language? What are the most important sciences of the Arabic ?language	2	1 st
=	=	rules in science Grammar) Speech gesticulate It consists of From him(	what ?Speech what the difference between speech And the words And the ?word what she Sections ?The word What is it Signs Names and actions ?And the letters	2	2nd
=	=	rules in science Grammar) Sections Verbs(	what she Types verb from where ?Formula what she Sections verb from where ?time what she Sections verb from where ?Composition	2	3rd

=	=	**rules in science Grammar** **indefinitenoun And knowledge(**	what We mean ?Indefinite what We mean With ?knowledge	2	**4th**
=	=	**rules in science Grammar** **Construction And grammar**	what We mean In the building ?And the Arab what she Signs ?Construction what she Signs Grammar Original ?And the branch	2	**5th**
=	=	**rules in science Grammar** **The subject The news(**	what The sentence ?Nominal what he identification The subject And the ?news what she Types The ?beginner what she Types the ?news	2	**6th**
=	=	**rules in science Grammar** **Thesubject**	what he identification ?actor what she Rulings ?actor what she Types ?actor	2	**7th**
=	=	**rules in science Grammar** **) Deputy The subject(**	what he identification Deputy ?actor how We formulate verb The building For the ?unknown	2	**8th**

			what she Rulings Deputy ?actor what that Deputize Deputize on ?actor what she Types Deputy actor		
=	=	**Spelling** **) the difference between The letter Dhad And the letter Dhad(**	what We mean phenomenon the difference between The letter Dhad ?And the letter Dhad ?Why It was named the language Arabic In language ?The letter Dad what she Places the difference between The letter Dhad And the letter Dhad from where) name And drawing and pronunciation Meaning((?	2	**9th**
=	=	**Spelling** **) rules writing The letter Ta** **Tied And open(**	what We mean With the letter taa Tied And ?open what he The officer To disperse between writing The letter Ta Tied ?And open what Places writing The letter Ta Tied And open in ?Names	2	**10th**

			what Places writing The letter Ta Open in ?Actions what Places writing The letter Ta Open in ?Letters what he the difference between distraction ?And the letter taa			
=	=	**Spelling** **) rules writing The hamza(**	what meaning Hamza ?Connection what meaning Hamza ?Cut what she Places ?Hamza	2	**11th**	
=	=	**rules in expression** **) Signs Punctuation(**	what We mean By numbering language ?And technically what she Types Signs ?Punctuation what appearance all ?type what Places all sign from Signs ?Punctuation	2	**12th**	
=	=	**text literary** **) Surah The Most Gracious(** **text Memorization/ Ten Verses**	reading Text Required from The Surah Set Withmovements statement The ruling The Bedouin For the text	2	**13th**	

=	=	**text literary** **Poet: Abu Firas Al- , Al-Hamdani Jawahiri**	what life The poet Abu Firas ?Al-Hamdani reading Poem: The Dove The mourner Set Withmovements analysis And clarification For verses The poem	2	**14th**
		Poet Badr Shakir al-Sayyab	?Who is al-Sayyab A memorization model of his poems with technical analysis		**15th**
		An and its sisters	What are the abrogators? What do we mean by them? In and its sisters and their functions		**16th**
		Open and close the hamza of an	When do we break the hamza of an and when ?do we open it		**17th**
		Original diacritical marks **The damma-** **The opening-** **The fraction-** **Minor diacritical marks** **And-** **Alif-** **Ya-**	Through it, we learn about the original and secondary diacritical .marks		**18th**

		nominal sentence **Subjects and predicates** **1- Types of subject** **Types of news –2**	The nominal sentence and its parsing		**19th**
		The five verbs	The five verbs, their parsing and occurrence in sentences		**20th**
		Linguistic errors part (2)	A collection of common linguistic errors and their correction		**21 st**
		Vocabulary **Synonyms and– antonyms** **Linguistic– differences** **Grammatical– equations**	Some general grammatical issues useful for non– specialized departments		**22nd**
		The dual and its declension	Definition of dual and its parsing		**23rd**
		Types of plurals **Sound masculine plural** **Sound feminine plural**	How to form plurals from singular and parse them		**24th**
		plural of brokenness	What is the broken plural and how is it		**25th**

			different from other ?plurals		
		Grammar engineering **Arabic grammar rules in an educational board**	A board that simplifies grammar and its parsing		**26th**
		Linguistic corrections	Some linguistic corrections from Arabic dictionaries for common uses		**27th**
		exam			**28th**
		The miracle of the Qur'an	Why is the Holy Quran ?miraculous		**29th**
		Linguistic errors part (3)	Some common linguistic errors and …their correction		**30th**

11. Course Evaluation

Short oral and written tests

Preparing the report

Homework

Practical and applied tests

Other contributions and participations

12. Learning and teaching resources

	Required textbooks (methodology if any)

Koran Concise in the Arabic Language Grammar meanings Arabic Grammar: Simplified Grammar and Morphology Spelling rules -A Brief Introduction to the Arabic Language for Non Specialists	Main references (sources)
Facilitating grammar Collection of Arabic lessons	Recommended supporting books and references (…scientific journals, reports)
There are many websites that deal with the Arabic language, including YouTube and scientific .research	Electronic references, websites

: **Course description**

This course description provides a concise summary of the main course features and the learning outcomes expected of the student, demonstrating whether the student has made the most of the .available learning opportunities. It must be linked to the program description

Al-Musayyab Technical Institute	**8. Educational institution**
Department of Plant Production Technologies	**9. Scientific Department / Center**
Irrigation and soil salinity	**10. Course Name/Code**
Direct – Mandatory	**11. Available attendance forms**
My semester – second academic level	**12. semester/year**

hours 60	13. Number of study hours (total)
2025 – 3 – 17	14. Date this description was prepared

: Course objectives .8

Enabling students to understand the relationship between soil irrigation and soil salinity and its impact on plant production, and to familiarize students with effective crop irrigation methods .and how to deal with the problem of soil salinity

Course outcomes, teaching, learning and assessment methods .9

Course instructor name : Hamdia Ali Attia

A– Cognitive objectives

1- .Identify the irrigation methods and systems used in irrigating fields

2- Learn about methods of resisting salinity

. Identify the components of irrigation water –3

. Use of salinity levels in irrigation water –4

Identify the most important indicators used in the world to determine the quality and –5
.suitability of irrigation water for agriculture

.Knowing how to classify irrigation water according to irrigation water classification systems –6

Diagnose different types of salts in the soil and classify soil affected by salinity according to –7
.different classification systems

Knowing the methods of coexistence with salinity and the methods followed in coexistence –8

.B – Course specific skill objectives

.Analyze irrigation water and identify its basic components, especially the percentage of salts .1

.Evaluate the quality of irrigation water used in agriculture according to modern classifications .2 .Estimation of positive and negative ions in irrigation water and soil .3 Measuring the total salt concentration in irrigation water and soil .4 Diagnosis of types of salts in soil and water .5 .Determining the critical depth of groundwater by chemical analysis of salts in the soil –6 Implementing a field experiment for cultivating saline soil to implement the principle of –7 .coexistence with salinity
Teaching and learning methods Lecture Scientific .1 .Discussion between students .2 .Prepare reports on the lecture .3
Evaluation methods Daily exams .1 Ask some questions .2 Giving homework .3
C– Emotional and value–based goals Benefit from the scientific material in understanding the course of events .1. Ability to deal with emergency situations .2. Choosing the best solution from among the available solutions and options .3. The ability to lead and face challenges .4. Developing students' abilities to analyze the content of social variables to identify thinking .5 .skills And problem solvingskills .
Teaching and learning methods

Lectures, identifying and diagnosing problems through explanation, exercises and classroom drills, practical applications to enable students to understand how to benefit from the specifications used and understand their application.
Evaluation methods **Direct questions , daily exams , and motivating students to actively participate. Discussion in . Lectures , extracurricular activities , exams Quarterly and actual attendance**
D – General and transferable skills (other skills related to employability and development) .(Personal **.Improve their intellectual skills .1** **Raising their conceptual awareness and moving the student from the stage of education to .2 .learning** **.Tendency to cooperate and teamwork .3**

Course structure .10

Evaluation method	Teaching method	Name of unit or topic	Required learning outcomes	watch es	week
Questions and answers	**Continuous orientation of students by the professor during the lecture**	- Definition of irrigation water Importance of irrigation - Role of irrigation in the success of the agricultural process	**Learn about irrigation and its importance**	**4**	**the first**
throw Questions	Lecture and discussion	- Water used for irrigation Factors affecting the suitability of . irrigation water	**Identify the types of irrigation water used and determine**	**4**	**the second**

			the suitability of this water		
Listening throw Questions	Lecture and discussion	Transmission of irrigation water in the soil - Effect of irrigation water quality on soil salinization	**Identifying water quality and its effect on soil salinization**	**4**	**the third**
Case study	Lecture and discussion	Means of delivering irrigation water to fields and methods of storing water (...Dams - reservoirs)	**Learn about the means of delivering irrigation water to fields and methods of storing water (dams , reservoirs) (.etc**	**4**	**Fourth**
Case studies	discussion	Evaluate the quality of irrigation water according to modern .classifications	**Learn how to analyze irrigation water and evaluate irrigation water .quality**	**4**	**Fifth**
Mini-lesson discussion	Lecture and discussion	Definition of soil salinity - the prevalence of salt-affected soils in Iraq, the Arab world, and the world	**Identifying soil salinity**	**4**	**Sixth**
Case study	Discussion and mini-lesson	**– Sources of salts in soils Types of salts common in soils affected by salinity**	**Identifying sources of salts in soil**	**4**	**Seventh**
Questions and Answers	Lecture and discussion	Definition of primary and secondary salinization	**Identify the type of salinization Primary or secondary salinization**	**4**	**The eighth**
Listening and asking questions	Lecture and discussion	Movement of salts and their distribution in the soil	**Learn how salts – are distributed and moved between .soil layers**	**4**	**Ninth**

Questions and Answers	Lecture and discussion	The effect of salts on soil , properties (morphological chemical , and biological) – salt balance in the soil	**Learn how salts affect soil .properties**	**4**	**tenth**

Evaluation method	**Teaching method**	**Name of unit or topic**	**Required learning outcomes**	**watch es**	**we k**
Questions and Answers	Lecture and discussion	Classification of salt-affected soils in different classification systems (American – Russian – French)	**Learn how to classify salt-affected soils according to different classification .systems**	**4**	**ele enth**
Asking questions	Lecture and discussion	The effect of increased salts in the soil on growing plants (direct and (indirect	**Learn about the effect of salts on plants and soil**	**4**	**tw lfth**
Listening Asking questions	Lecture and discussion	– Coexistence with salinity – Coexistence methods Cultivation of soil affected by salinity	**Learn how to live with salinity and use methods used in coexistence**	**4**	**thi teen**
Listening Asking questions	Lecture and discussion	Selecting crops suitable for salt-affected soils and classifying plants according to their susceptibility to salinity	**Identify and classify salt-tolerant crops**	**4**	**fou rteen**
Listening Asking questions	Dialogue and criticism	Fertilizing salt-affected soil	**Learn how to fertilize salt-affected soil.**	**4**	**fif eenth**

:Infrastructure .11	
Curriculum	Required textbooks .1
Soil Salinity: Theoretical and Applied Foundations Written by Dr. Ahmed Haider Al-Zubaidi	Main references (sources) .2
Summarized lectures prepared by the subject teacher	:A. Recommended books and references
Specialized websites	b. Electronic references, websites

Curriculum Development Plan .12
.Providing academic support capabilities in organizing field visits * Providing an appropriate classroom environment that enables teachers to diversify teaching * . strategies Providing information technology in the library campus * Hosting experts from outside the institute, or from the work environment for which they are * preparing, to benefit from their experience in Develop the curriculum according to the .actual needs of the labor market

Course Description

.Introducing the student to the foundations and principles of summer crop production in Iraq

Al–Musayyab Technical Institute	32. Educational institution
Department of Plant Production Technologies	33. Scientific Department / Center
Summer field crops	34. Course Name/Code
Lecture	35. Available attendance forms
quarterly	36. semester/year
79	37. Number of study hours (total)
2024/2/	Date of preparation of this .7 description

Course objectives .8
18- .Land preparation and preparation operations for planting summer crops
19- .The appropriate way to grow each crop
.Service operations for all crops at different plant stages until harvest–3
.Transformation and classification processes of the most important summer crops in Iraq –4
Name of the course administrator .8
M.D. Auras Mohsen Kazem

Teaching, learning and assessment strategies
A– Cognitive objectives Teaching students how to handle summer field crops so that they meet modern scientific –A1 .specifications and management methods

Introducing students to how to develop summer field crops so that they become able to describe and –2 .serve them in various types

20- .Enabling the student to know how to deal with laboratory equipment and materials

.B – Course specific skill objectives

.Providing the student with skills to apply scientific methods in summer crop management –1

.Training students on the production of summer field crops to achieve high productivity –2

Providing the student with the necessary skills to conduct laboratory tests related to crops and soil and –3 .how to give appropriate scientific judgments

Teaching and learning methods

(Lecture, laboratory, methodical training, summer training)

,Giving scientific and theoretical lectures using projectors, PowerPoint presentations, slides, microscopes and experiments examining plant samples, using various laboratory equipment and devices, and a .wooden canopy

Evaluation methods

(Oral exams, written exams, semester exams, final exams, daily assessment)

C– Emotional and value–based goals

–A1

Teaching and learning methods

,Practical and theoretical lectures, laboratory, scientific films, agricultural facility, scientific visits) (systematic field training, summer training

Evaluation methods
(**Oral exams**, **written exams**, **semester exams**, **final exams**, **daily assessment**)
.**D – General and transferable skills** (**other skills related to employability and personal development**)

26. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	week
Written exam	Lecture	Diagnosis of summer crop seeds, diagnosis methods, seed drawing, preparing the land for planting .summer crops	My skills ID	5 = 3+2 hours	1
Written exam	Lecture	,Fertilization calculating the amount of fertilizer added per unit area, preparing the land for planting summer crops	====	=	2
Written exam	Lecture	Sunflower crop production, botanical description, maturity signs, planting sunflower, white and yellow corn, fertilizing .and irrigation	====	=	3
Written exam	Lecture	Sunflower crop production, botanical description, maturity signs, planting sunflower, white and yellow corn, fertilizing .and irrigation	====	=	4
Written exam	Lecture	Planting the remaining summer crops, which ,are cotton, sesame ,soybeans, pistachios mung beans, jute, and chickpeas, fertilizing .and irrigating them	====	=	5

Written exam	**Lecture**	**Cotton crop production, botanical ,description, varieties machines used in cotton picking and sorting, staple characteristics.**	**====**	**=**	**6**
Practical evaluation	**Practical lecture**	**Maize crop production, plant description, varieties and groups, service operations for summer crops.**	**====**	**=**	**7**
Practical evaluation	**Practical lecture**	**,Rice production ,botanical description rice groups and varieties, rice hulling process and equipment used for this, rice production problems.**	**====**	**=**	**8**
Practical evaluation	**Practical lecture**	**Sesame crop production, botanical description, cultivated varieties, recording notes on existing winter crops in the field.**	**====**	**=**	**9**
Practical evaluation	**Practical lecture**	**Production of field pistachio and mung bean crops, plant ,description, varieties receiving reports and discussing some of them.**	**====**	**=**	**10**
Practical evaluation	**Practical lecture**	**Soybean crop production, plant ,description, varieties**	**====**	**=**	**11**

		problems of expanding ,crop cultivation students going out to carry out service operations for existing summer crops in the field.			
Practical evaluation	Practical lecture	Cotton crop production, botanical ,description, varieties machines used in cotton picking and sorting, staple characteristics.	====	=	12
Practical evaluation	Practical lecture	Tobacco crop production, botanical ,description, varieties leaf picking and drying, completion of student report discussion	====	=	13
Written exam	Lecture	Production of jute and sesame crops, botanical ,description, varieties ,fiber separation ,harvesting steps recording notes on existing summer crops.	====	=	14
Written exam	Lecture	White corn production, plant ,description, varieties complementary summer crop service operations, existing in the field.	====	=	15

27. The structure of the course

Protected Agriculture Methodological Book, Course Educational Kit	Required textbooks –1
Textbooks taught in corresponding colleges and universities	Main references (sources) –2
Foreign and Arab references on protected agriculture	A– Recommended books and refe ences (.scientific journals, reports, etc)
Searching websites in agricultural sciences	…B – Electronic references, websit s

28. Course Evaluation
By distributing the grade out of 100 according to the tasks assigned to the student, such as daily .preparation, daily, oral, monthly and written exams, reports, etc
Learning and teaching resources .13

	Curriculum books, if any
	Main References..Sources
	Supporting books and references recomme ded .by scientific journals. Reports
	Electronic references and websites

Course Description Form

:Course name
Animal production basics
Course code
semester/year
Chapter One / First Stage

Date this description was prepared
1/3/2024
Available attendance forms
Weekly and according to the schedule
Number of study hours (total) / Number of units (total)
hours / 4 units 4
Name of the course administrator (if more than one name is mentioned)
:the name :Marwa Khaled Abdul Karim Email marwa.niser.ika@atu.edu.iq
Course objectives

,Introducing students to the economic importance of poultry, sheep .goats, and cows, and the most important breeds Introducing students to laboratory equipment and how it works Identify the factors affecting poultry, sheep, goats and cows	Course objectives

Teaching and learning strategies	
– Explaining on the board – Presentation – Coordination with students – Training Discussion	Strategy

Course structure

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Practical tests Midterm exams Final exams	Lecture	Animal production basics	The economic importance of poultry farming – the poultry industry in Iraq	4	1

Daily evaluation					
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Types of poultry – production – hatching incubation – poultry farming supplies	4	2
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Egg production – egg– – laying chicken breeds egg–laying chicken farming systems – factors affecting egg production	4	
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Meat production – Broiler breeds – Broiler rearing requirements – Factors affecting the economic characteristics of broiler chickens	4	3
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Hatching and hatchery – management – Hatching Hatching machine	4	4

Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Factors affecting the – quality of hatching eggs Specifications of eggs suitable for hatching	4	5
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	The economic importance of sheep	4	6
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	– Sheep classification World sheep breeds	4	7
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Reproduction – Pregnancy Birth in sheep –	4	8
Practical tests Midterm exams	Lecture	Animal production basics	and wool production in sheep	4	9

Final exams Daily evaluation					
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Goat Breeds – Goat Raising	4	10
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	The economic importance of cows	4	11
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Classification of cows and their types	4	12
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	The basics of milk and meat production in cows	4	13

Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics	Cattle field management	4	14
Practical tests Midterm exams Final exams Daily evaluation	Lecture	Animal production basics		4	15

Course Evaluation :Evaluation is done through .Daily, monthly and semester exams .Group interaction and participation in discussing and solving exercises .2	
The grade is distributed out of 100. 50 points are calculated based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written and practical exams, attendance .and reports. 50 points are for the final written and practical exam, etc	
Learning and teaching resources	
	Required textbooks (methodology (if any
Dr. Abdel Hamid Mohamed Abdel Hamid 2015 – 1	Main references (sources)
Specialized websites	Recommended supporting books ,and references (scientific journals (…reports