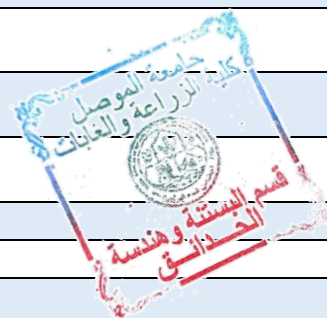




Horticulture Department course description

1. Course name:
Organic culture
2. Course code:
ORCU216
2. 1. Semester/Year: Annual
Second semester 2024-2025
3- The date this description was prepared
1/2/2025
3. 1. Available attendance forms:
My presence + electronic
4. Number of study hours (total)/number of units (total):
2theoretical + 3 practical / 3.5
5. 1. Name of the course administrator (if more than one name is mentioned)
Prof. Dr. Ayad Hani Al-Alaf Email: Ayad_alalaf@uomosul.edu.iq
Lecturer Dr. Ibtisam Ismail Ahmed
6. Course objectives
<ul style="list-style-type: none"> • Introducing the student to the importance of organic agriculture. • Learn about the advantages of organic agriculture products. • Learn about the benefits of fertilizing with organic fertilizers. • Identify the harms of adding non-decomposing animal fertilizers. • Learn about practical methods for making compost. • Identify the factors that affect the compost manufacturing process. • Identify the types of organic fertilizers. • Knowing when to add organic fertilizers. • Learn how to add organic fertilizers. • Identify plant extracts and antioxidants and their uses in organic agriculture. • Identify the importance of biofertilizers.




- Identify the types of biofertilizers.
- Identify the agricultural practices used in organic agriculture (fertilization, biological control, and agricultural rotation).

Teaching and learning strategies .7


<p>practical part : practical</p> <p>.Live lectures with students -1 .PowerPoint slides -2 .Field visits to fruit orchards -3 Applying some practical skills in nursery and wooden -4 ?canopy facilities .Dialogues and discussions with students -5 6- Assigning tasks and reports</p>	<p>The theoretical part :My theory</p> <p>.Live lectures with students -1 .PowerPoint slides -2 .Introduction pictures -3 .Audio recordings -4 .Dialogues and discussion -5 6- Assigning tasks and reports</p>
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Course structure .8

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
1 Theoretical introduction to organic agriculture. An overview of organic agriculture, its importance and spread in the world and Iraq, and the main elements on which organic agriculture depends. Interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical introduction to organic agriculture. An overview of organic agriculture, its importance and spread in the world and Iraq, and the main elements on which organic agriculture depends. Interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical introduction to organic agriculture. An overview of organic agriculture, its importance and spread in the world and Iraq, and the main elements on which organic agriculture depends. Interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical introduction to organic agriculture. An overview of organic agriculture, its importance and spread in the world and Iraq, and the main elements on which organic agriculture depends. Interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical introduction to organic agriculture. An overview of organic agriculture, its importance and spread in the world and Iraq, and the main elements on which organic agriculture depends. Interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1
3 Practical B1: The student acquires knowledge and concepts in knowing and the importance of the advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	3 Practical B1: The student acquires knowledge and concepts in knowing and the importance of the advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	3 Practical B1: The student acquires knowledge and concepts in knowing and the importance of the advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	3 Practical B1: The student acquires knowledge and concepts in knowing and the importance of the advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	3 Practical B1: The student acquires knowledge and concepts in knowing and the importance of the advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	

the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to prepare a report. Short practical test1	dialogue and discussion, and assignment to prepare a report. Short practical test1	interactive lecture, brainstorming, dialogue and discussion, and assignment to prepare a report. Short practical test1 		advantages of organic agriculture for the environment and human health. Definition of organic agriculture and its most important features: interactive lecture, brainstorming, dialogue and discussion, and assignment to prepare a report. Short practical test1	
1 Theoretical: Advantages of organic agricultural products, nutritional value of organic agricultural products, and sources of organic materials. Interactive lecture, brainstorming, dialogue and discussion, assignment to produce a report. Short exams, assignments, discussions	1 Theoretical: Advantages of organic agricultural products, nutritional value of organic agricultural products, and sources of organic materials. Interactive lecture, brainstorming, dialogue and discussion, assignment to produce a report. Short exams, assignments, discussions	1 Theoretical: Advantages of organic agricultural products, nutritional value of organic agricultural products, and sources of organic materials. Interactive lecture, brainstorming, dialogue and discussion, assignment to produce a report. Short exams, assignments, discussions	1 Theoretical: Advantages of organic agricultural products, nutritional value of organic agricultural products, and sources of organic materials. Interactive lecture, brainstorming, dialogue and discussion, assignment to produce a report. Short exams, assignments, discussions	1 Theoretical: Advantages of organic agricultural products, nutritional value of organic agricultural products, and sources of organic materials. Interactive lecture, brainstorming, dialogue and discussion, assignment to produce a report. Short exams, assignments, discussions	2
3 Practical B1: The student learns about the most important types of organic fertilizers	3 Practical B1: The student learns about the most important types of organic fertilizers	3 Practical B1: The student learns about the most important types of organic fertilizers	3 Practical B1: The student learns about the most important types of organic fertilizers	3 Practical B1: The student learns about the most important types of organic fertilizers	
1 Theoretical requirements for organic farming The conditions that must be met in the elements of an organic farm: interactive lecture, brainstorming, dialogue and	1 Theoretical requirements for organic farming The conditions that must be met in the elements of an organic farm: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical requirements for organic farming The conditions that must be met in the elements of an organic farm: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical requirements for organic farming The conditions that must be met in the elements of an organic farm: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	1 Theoretical requirements for organic farming The conditions that must be met in the elements of an organic farm: interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	3

discussion, and assignment to produce a report. Short exams, assignments, discussions				interactive lecture, brainstorming, dialogue and discussion, and assignment to produce a report. Short exams, assignments, discussions	
3 Practical B3: It is recommended to add organic fertilizers at the appropriate time.	3 Practical B3: It is recommended to add organic fertilizers at the appropriate time.	3 Practical B3: It is recommended to add organic fertilizers at the appropriate time.	3 Practical B3: It is recommended to add organic fertilizers at the appropriate time.	3 Practical B3: It is recommended to add organic fertilizers at the appropriate time.	
1 Theory of organic matter and humus in agricultural soils Sources of organic matter in agricultural soils	1 Theory of organic matter and humus in agricultural soils Sources of organic matter in agricultural soils	1 Theory of organic matter and humus in agricultural soils Sources of organic matter in agricultural soils	1 Theory of organic matter and humus in agricultural soils Sources of organic matter in agricultural soils	1 Theory of organic matter and humus in agricultural soils Sources of organic matter in agricultural soils	4
3 Practical B3: Experiment with growing plants in different organic growing media	3 Practical B3: Experiment with growing plants in different organic growing media	3 Practical B3: Experiment with growing plants in different organic growing media	3 Practical B3: Experiment with growing plants in different organic growing media	3 Practical B3: Experiment with growing plants in different organic growing media	
1 Theoretical content of soil organic matter and its relationship to fertility Components of organic matter in various agricultural soils and their relationship to increasing fertility and its effect on the growth of horticultural crops Interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical content of soil organic matter and its relationship to fertility Components of organic matter in various agricultural soils and their relationship to increasing fertility and its effect on the growth of horticultural crops Interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical content of soil organic matter and its relationship to fertility Components of organic matter in various agricultural soils and their relationship to increasing fertility and its effect on the growth of horticultural crops Interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical content of soil organic matter and its relationship to fertility Components of organic matter in various agricultural soils and their relationship to increasing fertility and its effect on the growth of horticultural crops Interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical content of soil organic matter and its relationship to fertility Components of organic matter in various agricultural soils and their relationship to increasing fertility and its effect on the growth of horticultural crops Interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	5

				discussion, field training. Short exams, assignments, discussions	
3 Practical C3: Using the appropriate method for making compost. Identifying the methods of making compost and the factors affecting them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical C3: Using the appropriate method for making compost. Identifying the methods of making compost and the factors affecting them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical C3: Using the appropriate method for making compost. Identifying the methods of making compost and the factors affecting them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical C3: Using the appropriate method for making compost. Identifying the methods of making compost and the factors affecting them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical C3: Using the appropriate method for making compost. Identifying the methods of making compost and the factors affecting them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field assessment	
					
1 Theoretical formation of humus in agricultural soils, humic acids and their natural properties, interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical formation of humus in agricultural soils, humic acids and their natural properties, interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical formation of humus in agricultural soils, humic acids and their natural properties, interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical formation of humus in agricultural soils, humic acids and their natural properties, interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	1 Theoretical formation of humus in agricultural soils, humic acids and their natural properties, interactive lecture, brainstorming, dialogue and discussion, field training. Short exams, assignments, discussions	
3 Practical B4: Experiment with making compost. Practical steps for making compost. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical B4: Experiment with making compost. Practical steps for making compost. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical B4: Experiment with making compost. Practical steps for making compost. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical B4: Experiment with making compost. Practical steps for making compost. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning and field assessment	3 Practical B4: Experiment with making compost. Practical steps for making compost. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning and field assessment	
				6	

				and field assessment	
1 Theoretical The benefits of humic acids for plants and soil The most important benefits that humus provides for horticultural plants and agricultural soils Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning Short exams, assignments, discussions	1 Theoretical The benefits of humic acids for plants and soil The most important benefits that humus provides for horticultural plants and agricultural soils Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning Short exams, assignments, discussions	1 Theoretical The benefits of humic acids for plants and soil The most important benefits that humus provides for horticultural plants and agricultural soils Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning Short exams, assignments, discussions	1 Theoretical The benefits of humic acids for plants and soil The most important benefits that humus provides for horticultural plants and agricultural soils Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning Short exams, assignments, discussions	1 Theoretical The benefits of humic acids for plants and soil The most important benefits that humus provides for horticultural plants and agricultural soils Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning Short exams, assignments, discussions	
3 Practical C3: Works on developing plans and programs to develop work in the field of organic agriculture. Visiting postgraduate students' research, and scientific research carried out using organic fertilizers, interactive lecture, brainstorming, dialogue and discussion, field training, self-learning, field project, assignment of tasks to report on what you learned during the visit.	3 Practical C3: Works on developing plans and programs to develop work in the field of organic agriculture. Visiting postgraduate students' research, and scientific research carried out using organic fertilizers, interactive lecture, brainstorming, dialogue and discussion, field training, self-learning, field project, assignment of tasks to report on what you learned during the visit.	3 Practical C3: Works on developing plans and programs to develop work in the field of organic agriculture. Visiting postgraduate students' research, and scientific research carried out using organic fertilizers, interactive lecture, brainstorming, dialogue and discussion, field training, self-learning, field project, assignment of tasks to report on what you learned during the visit.	3 Practical C3: Works on developing plans and programs to develop work in the field of organic agriculture. Visiting postgraduate students' research, and scientific research carried out using organic fertilizers, interactive lecture, brainstorming, dialogue and discussion, field training, self-learning, field project, assignment of tasks to report on what you learned during the visit.	3 Practical C3: Works on developing plans and programs to develop work in the field of organic agriculture. Visiting postgraduate students' research, and scientific research carried out using organic fertilizers, interactive lecture, brainstorming, dialogue and discussion, field training, self-learning, field project, assignment of tasks to report on what you learned during the visit.	7
1 Theoretical	1 Theoretical organic	1 Theoretical organic	1 Theoretical organic fertilizers and soil conditioners, types	1	8



organic fertilizers and soil conditioners, types of organic fertilizers added to agricultural soils, interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions	fertilizers and soil conditioners, types of organic fertilizers added to agricultural soils, interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions	fertilizers and soil conditioners, types of organic fertilizers added to agricultural soils, interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions	of organic fertilizers added to agricultural soils, interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions	Theoretical organic fertilizers and soil conditioners, types of organic fertilizers added to agricultural soils, interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions	
3 Practical C2: Explains the most important plant extracts used in organic agriculture.	3 Practical C2: Explains the most important plant extracts used in organic agriculture.	3 Practical C2: Explains the most important plant extracts used in organic agriculture.	3 Practical C2: Explains the most important plant extracts used in organic agriculture.	3 Practical C2: Explains the most important plant extracts used in organic agriculture.	
1 Theoretical Methods and dates for adding organic fertilizers. The dates for adding organic fertilizers and the most important methods of addition are discussed. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theoretical Methods and dates for adding organic fertilizers. The dates for adding organic fertilizers and the most important methods of addition are discussed. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theoretical Methods and dates for adding organic fertilizers. The dates for adding organic fertilizers and the most important methods of addition are discussed. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theoretical Methods and dates for adding organic fertilizers. The dates for adding organic fertilizers and the most important methods of addition are discussed. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theoretical Methods and dates for adding organic fertilizers. The dates for adding organic fertilizers and the most important methods of addition are discussed. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	9
3 Practical C2: Write a report on the compost industry.	3 Practical C2: Write a report on the compost industry.	3 Practical C2: Write a report on the compost industry.	3 Practical C2: Write a report on the compost industry.	3 Practical C2: Write a report on the compost industry.	
1 theoretical organic fertilizer (compost)	1 theoretical organic fertilizer (compost)	1 theoretical organic fertilizer (compost)	1 theoretical organic fertilizer (compost)	1 theoretical organic fertilizer (compost)	10



Its composition and the main purpose of its production	Its composition and the main purpose of its production	Its composition and the main purpose of its production	Its composition and the main purpose of its production	Its composition and the main purpose of its production	
1 Theory of fertilizers and biofertilization. Identifying the importance of biofertilizers, its types, benefits, and the characteristics of the organism present in the biofertilizer. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theory of fertilizers and biofertilization. Identifying the importance of biofertilizers, its types, benefits, and the characteristics of the organism present in the biofertilizer. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theory of fertilizers and biofertilization. Identifying the importance of biofertilizers, its types, benefits, and the characteristics of the organism present in the biofertilizer. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theory of fertilizers and biofertilization. Identifying the importance of biofertilizers, its types, benefits, and the characteristics of the organism present in the biofertilizer. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	1 Theory of fertilizers and biofertilization. Identifying the importance of biofertilizers, its types, benefits, and the characteristics of the organism present in the biofertilizer. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, and discussions.	11
3 Practical C3: Producing horticultural crops using organic fertilizers. Monitoring the cultivation of plants in pots to evaluate the effect of fertilizers on them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical C3: Producing horticultural crops using organic fertilizers. Monitoring the cultivation of plants in pots to evaluate the effect of fertilizers on them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical C3: Producing horticultural crops using organic fertilizers. Monitoring the cultivation of plants in pots to evaluate the effect of fertilizers on them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical C3: Producing horticultural crops using organic fertilizers. Monitoring the cultivation of plants in pots to evaluate the effect of fertilizers on them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical C3: Producing horticultural crops using organic fertilizers. Monitoring the cultivation of plants in pots to evaluate the effect of fertilizers on them. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	
1 Theoretical plant extracts and antioxidants	1 Theoretical plant extracts and antioxidants	1 Theoretical plant extracts and antioxidants	1 Theoretical plant extracts and antioxidants	1 Theoretical plant	



				extracts and antioxidants	
Its types, importance, and mechanism of operation: Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	Its types, importance, and mechanism of operation: Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	Its types, importance, and mechanism of operation: Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	Its types, importance, and mechanism of operation: Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	Its types, importance, and mechanism of operation: Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	
1 Theoretical extracts of plants, herbs and marine algae	1 Theoretical extracts of plants, herbs and marine algae	1 Theoretical extracts of plants, herbs and marine algae	1 Theoretical extracts of plants, herbs and marine algae	1 Theoretical extracts of plants, herbs and marine algae	
3 Practical B2: Successfully plan to develop, improve and increase the production of horticultural crops using organic agriculture. Follow up on the results of the potting experiment and discuss the results. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical B2: Successfully plan to develop, improve and increase the production of horticultural crops using organic agriculture. Follow up on the results of the potting experiment and discuss the results. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical B2: Successfully plan to develop, improve and increase the production of horticultural crops using organic agriculture. Follow up on the results of the potting experiment and discuss the results. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical B2: Successfully plan to develop, improve and increase the production of horticultural crops using organic agriculture. Follow up on the results of the potting experiment and discuss the results. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	3 Practical B2: Successfully plan to develop, improve and increase the production of horticultural crops using organic agriculture. Follow up on the results of the potting experiment and discuss the results. Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning and field evaluation.	13
1 Theory of amino acids, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-	1 Theory of amino acids, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theory of amino acids, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theory of amino acids, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theory of amino acids, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	14

learning, short exams, assignments, discussions.				training, practical exercises, self-learning, short exams, assignments, discussions.	
3 Practical C2: Know and discuss topics related to organic farming.	3 Practical C2: Know and discuss topics related to organic farming.	3 Practical C2: Know and discuss topics related to organic farming.	3 Practical C2: Know and discuss topics related to organic farming.	3 Practical C2: Know and discuss topics related to organic farming.	
1 Theoretical: Vitamins, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theoretical: Vitamins, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theoretical: Vitamins, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theoretical: Vitamins, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	1 Theoretical: Vitamins, their types, importance, and mechanisms of action. Interactive lecture, dialogue and discussion, field training, practical exercises, self-learning, short exams, assignments, discussions.	15
3 Practical D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	3 Practical D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	3 Practical D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	3 Practical D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	3 Practical D1: Acquiring the communication skills necessary to deal with confidence and certainty at the individual and group levels	

Course evaluation .9

Relative % weight	Degree	(Calendar date (week	Calendar methods	ت
% 5	Theoretical: 3 Practical:- 2	Theoretical: 2-15 Practical: 2 - 15	a . Daily oral exams	1
% 10	Theoretical: 5 Practical: 5	Theoretical: 2-15 Practical: 2 - 15	B . Daily written exams	2
% 15	Theoretical: 10 Practical: 15	Theoretical: 7-13 Practical: 6 - 14	C. 2 semester exams during the semester for each	3
% 10	Theoretical: 7 Practical: 3	Theoretical: 15 Practical: 15	Practical and theoretical	4

% 40	Theoretical: 40	Theoretical:	D . Assigning students to prepare	5
% 20	Practical: 20	Practical:	reports on topics	
% 100	100		the study.	6
Learning and teaching resources .10				
Organic agriculture and the environment / Prof. Dr. Jassim Mohammed Alwan			Required textbooks (methodology, if any)	
			Main references (sources)	
			Recommended supporting books and references (scientific journals, reports....)	
Reports, bulletins and studies			Electronic references, Internet sites	

Practical subject
teacher
Lecturer Dr. Ibtisam
Ismail Ahmed

Theoretical subject teacher
Prof. Dr. Ayad Alani
Prof. Dr. Asmaaf

Chairman of the Scientific Committee

Prof. Dr. Jassim Mohammed Alwan

Head of the department

Prof. Dr. Asmaa Muhammad Adel