Course Description Vegetables production2

1. Course Name:
Vegetables production2
2. Course Code:
VEPR310
3. Semester / Year:
Second semester/ Third stage/ 2024-2025
4. Description Preparation Date:
1/2/2025
5. Available Attendance Forms:
in person + online
6. Number of Credit Hours
2 theoretical + 3 practical (5) / Number of Units (3.5)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Safwan Mohammed Hajem – Dr. Mohanad Aqil Ahmed – Assit. Teacher, Saher Ali khalw **Email: Safwan.hajem@uomosul.edu.iq mohand.aq@uomosul.edu.iq sahar_khalw@uomosul.edu.iq**
8. Course Objectives
Enable the student to understand and comprehend the science of vegetable production and its relationship to other sciences. **Enable the student to know the most important scientific methods for identifying vegetable production.** **Enable the student to become familiar with the concept of vegetable production.** **Enable the student to be able to identify all types of summer vegetables and all phenomena related to summer vegetable production.** **The student can explain all aspects of life related to the science of summer vegetable production.**
9. Teaching and Learning Strategies
- Interactive lecture **- Brainstorming** **- Dialogue and discussion** **- Field Training** **- Practical exercises** **- Field project** **- Self-education**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2 Theoretical	A1: Learn about preparing vegetable crops, their benefits, and an introduction and definition of vegetable crop planting arrangements. B1: Possesses the practical and intellectual knowledge and concepts that help them prepare vegetable crop plantings. D3: Participates with community members and works to educate them about preparing vegetable crop plantings and their impact on increasing yields. E1: Contributes to enhancing the value of vegetable crops among community members, raising their awareness of the importance of vegetable crops and increasing green spaces to improve the environment and serve the community.	Preparing vegetable crops: tomatoes, potatoes, eggplant, peppers.	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam
	3 Practical	C3: Uses the information he needs an what is available to him to master his work	Preparing and preparing the land for planting summer vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Short practical test 1
2	2 Theoretical	A2: Identify the morphological structure and types of vegetables, the classification principles of various vegetable crops, and their urban and environmental importance. B1: Possesses the practical and intellectual knowledge and concepts that assist in the morphological description of vegetable crop C5: Successfully balances the investment and use of vegetable plants and their employment in accordance with the coordination processes of different types and styles of farms.	Morphological description of summer vegetable crops and some families whose cultivation is expected to spread in Iraq:	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Midterm Exam 1, Final Exam
	3 Practical	C3: Uses the information he needs and what is available to him to master his work	Legume family: beans, cowpeas.	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning	direct drawing

3	2 Theoretical	A2: Defines the cultivation systems of cucumber, watermelon, and melon crops, types of gardens, fertilization principles and elements, and their urban and environmental importance.	Cucurbitaceae family: cucumber, watermelon, melon	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Midterm Exam 1, Final Exam
	3 Practical	C3: Uses the information needed and available to master his work. C4: Develops plans and programs for development in the field of zucchini cultivation. D1: Acquires skills in cultivating and producing zucchini.	Butternut squash, pumpkin	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Field evaluation
4	Theoretical	A2: Defines the precise system for servicing and cultivating pumpkins and squash. C4: Develops plans and programs for developing pumpkin and squash cultivation in accordance with environmental and community requirements. D3: Participates with community members and works to raise their awareness of the importance of increasing vegetation cover and its impact on pollution control. E1: Contributes to enhancing community members' knowledge and awareness of the importance of pumpkin and squash crops, and increasing green spaces to improve the environment and serve the community.	Pumpkin, gherkin.	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Midterm Exam 1, Final Exam, Report
	3 Practical	C3: Uses the information needed and available to master his work. C4: Develops plans and programs for developing okra cultivation in urban areas, in accordance with environmental and community requirements. C5: Successfully balances the investment and use of okra plants and their employment in a manner consistent with the coordination processes for various types and styles of okra vegetable farms.	Malvaceae family: Okra	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning	Short Practice Test 2, Direct Drawing
5	2 Theoretical	C4: Develops plans and programs for developing grassland landscaping in accordance with environmental and community requirements. D3: Participates with community members and works to raise their awareness of the importance of	Poaceae family: Sweetcorn	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam, Report

		increasing vegetation cover and its impact on pollution control. E1: Contributes to enhancing the aesthetic values of community members, raising their awareness of the importance of sweet corn and increasing green spaces to improve the environment and serve the community.			
	3 Practical	C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in the field of blackberry plant production, in accordance with environmental and societal requirements. D1: Acquires the communication skills necessary to interact confidently and confidently at both the individual and group levels.	For the Araceae family: sweet potato	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Field evaluation
6	2 Theoretical	A2: Identify the lily family's planting systems, the foundations and various design elements, and their urban and environmental significance. C4: Develop development plans and programs for landscaping in urban areas, in accordance with environmental and community requirements. D1: Acquire the communication skills necessary to interact confidently and confidently at both the individual and group levels. D3: Participate with community members and raise their awareness of the importance of increasing vegetation cover and its impact on pollution control. E1: Contribute to enhancing the aesthetic values of community members and raising their awareness of the importance of green plants and increasing green spaces to improve the environment and serve the community.	Lily family: Aspergillus	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	short test, final test
	3 Practical	C2: Innovates new designs and layouts for mushroom farms using modern computer applications and the ability to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in the field of mushroom cultivation and service, in accordance	Fungus family: Mushrooms	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning	Live drawing and homework

		with environmental and societal requirements. **C5: Successfully balances the investment and use of mushroom plants and their employment in a manner consistent with the marketing of different mushroom species and models.**			
7	**2 Theoretical**	**A3: Employs field and technical facilities in farm designs and layouts to enhance their nutritional and aesthetic value.** **C4: Develops plans and programs for development in the field of artichoke farm layouts, in accordance with environmental and community requirements.** **C5: Successfully balances the investment and use of artichoke plants and their employment in a manner consistent with the layout processes of different farm types and styles.**	**Composite family: Artichoke**	**Interactive lecture, brainstorming, dialogue and discussion, self-learning,**	**Midterm Exam 2, Final Exam**
	3 Practical	**C1: Creates new designs and arrangements for vegetable varieties by hand, using modern computer applications, and is able to select plants according to prevailing climatic conditions.** **C3: Uses the information needed and available to master their work.** **C4: Develops plans and programs for developing vegetable cultivation in urban areas, in accordance with environmental and societal requirements.** **C5: Successfully balances the investment and use of vegetable plants and their employment in a manner consistent with the coordination processes for different types and models of vegetable farms.** **D1: Acquires the communication skills necessary to interact confidently and confidently at both the individual and group levels.**	**A scientific visit to private vegetable farms outside the university**	**Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, field project, self-learning**	**Field project**
8	**2 Theoretical**	**A3: Employs structural and technical facilities in the designs and layouts of taro farms to enhance their functional value.** **C4: Develops development plans and programs for the layout of taro farms and urban areas, in accordance with environmental and community requirements**	**The Araceae family: Taro**	**Interactive lecture, brainstorming, dialogue and discussion, self-learning**	**Midterm Exam 2, Final Exam**

	3 Practical	**C2: Creates new designs and arrangements for intercropping types by hand and using modern computer applications, with the ability to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for intercropping development in accordance with environmental and societal requirement C5: Successfully balances the investment and use of intercropping plants and employs them in a way that is compatible with the coordination processes of various types and styles of gardens.**	**Intercropping**	**Interactive lecture, brainstorming, dialogue and discussion, self-learning,**	**Live drawing and homework**
9	**2 Theoretical**	**A4: Uses rotational planting of vegetable crops. C3: Uses the information the designer needs and has at his disposal to perfect his work.**	**Succession cropping in vegetable crops**	**Interactive lecture, brainstorming, dialogue and discussion, self-learning,**	**Midterm Exam 2, Final Exam**
	3 Practical	**C2: Innovates new designs and arrangements for agricultural rotations using modern computer applications and the ability to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in the field of agricultural rotations, consistent with environmental and societal requirements. C5: Successfully balances the investment and use of agricultural rotations and employs them in a manner consistent with the coordination processes for different types and models of rotations.**	**crop rotation**	**Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, field project, self-learning**	**Live drawing and homework**
10	**2 Theoretical**	**A2: Identify dual-rotation crop rotation systems, their various design principles and elements, and their urban and environmental significance. C5: Successfully balance the investment and use of vegetable plants and their employment in a way that is compatible with the coordination processes of different types and styles of vegetable farms.**	**Double crop rotation**	**Interactive lecture, brainstorming, dialogue and discussion, self-learning,**	**Term 2 Exam**

	3 Practical	C2: Creates new designs and arrangements for three-year crop rotations by hand and using modern computer applications, with the ability to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in the field of three-year crop rotation and urban design, in accordance with environmental requirements. C5: Successfully balances the investment and use of vegetable plants and employs them in a manner that is compatible with the coordination processes of different types and styles of gardens.	Three-year crop rotation	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Live drawing and homework
11	2 Theoretical	A2: Identify four-crop rotation systems, their various design principles and elements, and their urban and environmental significance. C5: Successfully balance the investment and use of rotation plants and their placement in a way that is compatible with the coordination processes of different types of crop rotations.	Four-year agricultural cycle	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Final exam
	3 Practical	C2: Devises methods to reduce physiological damage in vegetable plants. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in the field of preventing physiological damage. C5: Successfully balances investment and the use of environmentally friendly products to reduce physiological damage.	Physiological damage	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, field project, self-learning	Live drawing and homework
12	2 Theoretical	A2: Identify pesticide systems and types, the principles of their use, and how to control insects and diseases affecting vegetables, as well as their urban and environmental importance. C5: Successfully balance the investment and use of pesticides and their application in accordance with pest control operations.	Insects and diseases affecting vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Final exam
	3 Practical	C2: Innovates and designs new harvesting methods using hand tools	Harvesting vegetable crops	Interactive lecture, brainstorming, dialogue	Live drawing and homework

		and modern mechanization applications. C3: Uses the information needed and available to master his work. C4: Develops plans and programs for development in the field of vegetable harvesting. C5: Successfully balances the investment and use of modern mechanization, employing it to suit the harvesting operations of various vegetable types.		and discussion, field training, practical exercises, field project, self-learning	
13	2 Theoretical	A2: Defines seed production systems. C3: Uses the information needed and available to master its work.	Seed production for vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Final exam
	3 Practical	C2: Innovates new methods for storing vegetable crops C3: Uses the information needed and available to master their work C4: Develops plans and programs for developing vegetable storage C5: Successfully balances the investment and use of refrigerated warehouses and employs them to suit the storage operations of different types of vegetables	Vegetable crop storage	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Live drawing and homework
14	2 Theoretical	C3: Uses the information needed and available to master his work. C5: Successfully balances the investment and use of vegetable plants and their placement in accordance with various marketing operations.	Marketing of vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	Short practical test, Final test
	3 Practical	C1: Innovates new designs and layouts for vegetable farms using modern computer applications and the ability to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for development in field design, in line with environmental and societal requirements. C5: Successfully balances the investment and use of vegetable plants and employs them in a manner consistent with the coordination processes for vegetable farm types and styles. D2: Efficiently utilizes modern technology to enable them to	Using computers in vegetable field design	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, field project, self-learning	Short practical test 3

		accomplish their academic and practical tasks.			
15	2 Theoretical	C4: Develops plans and programs for urban vegetable horticulture development, consistent with environmental and community requirements. C5: Successfully balances the investment and use of vegetable plants and their placement in a manner consistent with the coordination processes of various types and styles of gardens.	Vegetable Physiology	Interactive lecture, brainstorming, dialogue and discussion, self-learning,	short test, final test
	3 Practical	C1: Creates new designs and arrangements for vegetable gardens by hand, using modern computer applications, and is able to select plants according to prevailing climatic conditions. C3: Uses the information needed and available to master their work. C4: Develops plans and programs for developing vegetable garden landscaping in urban areas, in accordance with environmental and societal requirements. C5: Successfully balances the investment and use of vegetable plants and employs them in a manner consistent with the coordination processes for different types and styles of gardens. D1: Acquires the communication skills necessary to interact confidently and confidently at both the individual and group levels. D2: Manages modern technology efficiently, enabling them to accomplish their academic and practical tasks.	Home Vegetable Garden Project	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, field project, self-learning	Field project

11. Course Evaluation

seq	Evaluation methods	Evaluation date (week)	Grade	Relative weight %
1	Report 1	fourth week	2.5	2.5
2	Report 2	fifth week	2.5	2.5
3	Short test (1)	sixth week	2	2
4	Quiz Short test (2)	fourteenth week	2	2
5	Quiz Short test (3)	fifteenth week	1	1
6	Semester test (1)	sixth week	7.5	7.5
7	Semester test (2)	eleventh week	7.5	7.5
8	Final theoretical test	Final semester exams	40	40
9	Practical field project	fifteenth week	5	5
10	Field evaluation	third and fifth week	2	2
11	Short test (1)	first week	1	1
12	Quiz Short test (2)	fourth week	0.5	0.5

13	Quiz Short test (3)	fourteenth week	2.5	2.5
14	Writing a report	Fourteenth week	2.5	2.5
15	Final practical test	Final semester exams	2	2
	Total	100	100%	100%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Vegetable Production Parts 1 and 2
Main references (sources)	- Dr. Adnan Nasser Matloub. 1985. Vegetable Production. Part One. Dar Al-Kutub for Printing and Publishing. - Matloub, Adnan Nasser (1988) Vegetable Production 2: Dar Al-Kutub for Printing and Publishing, University of Mosul, Republic of Iraq. Hassan, Ahmed Abdel Moneim (2017) Basics of Vegetable Production: Arab House for Publishing and Distribution, First Edition, Cairo, Arab Republic of Egypt.
Recommended books and references (scientific journals, reports...)	Vegetables production Plant physiology
Electronic References, Websites	Ketabpedia.com

Theoretical subject teacher
Dr. Safwan Mohammed Hajem

Practical subject teacher
Dr. Mohanad Aqil Ahmed

Practical subject teacher
Saher Ali Khalw

Chairman of the Scientific Committee
Prof. Dr. Jassim Mohammed Alwan

Head of the department
Prof. Dr. Asmaa Muhammad Adel