

## Course Description Vegetable production

1. Course Name: <b>Vegetable production</b>					
2. Course Code: <b>VEPR121</b>					
3. Semester / Year: <b>2024 - 2025</b>					
4. Description Preparation Date: <b>1/9/2024</b>					
5. Available Attendance Forms: <b>in person</b>					
6. Number of Credit Hours <b>2 theoretical + 3 practical (5) / Number of Units (3.5)</b>					
7. Course administrator's name (mention all, if more than one name) Name: <b>Dr. Safwan Mohammed Hajem - Dr. Mohanad Aqil Ahmed</b> Email: <a href="mailto:Safwan.hajem@uomosul.edu.iq">Safwan.hajem@uomosul.edu.iq</a> <a href="mailto:mohand.aq@uomosul.edu.iq">mohand.aq@uomosul.edu.iq</a>					
8. Course Objectives					
<p>Enabling the student to understand and comprehend the science of vegetable production and its relationship to other science</p> <p>Enabling the student to know the most important scientific methods for identifying vegetable production.</p> <p>Enabling the student to become familiar with the concept of vegetable production.</p> <p>Enabling the student to be able to identify all types of summer vegetables and all phenomena related to summer vegetable production.</p> <p>The student can explain all aspects of life related to the science of summer and winter vegetable production.</p> <p>Enabling the student to become familiar with the most important laboratory and field methods related to the science of vegetable production and to conduct experiments to grow all winter vegetable crops.</p>					
9. Teaching and Learning Strategies					
<ul style="list-style-type: none"> <li>- Interactive lecture</li> <li>- Brainstorming</li> <li>- Dialogue and discussion</li> <li>- Field Training</li> <li>- Practical exercises</li> <li>- Field project</li> <li>- Self-education</li> </ul>					
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	A: Identify horticulture and mention the main branches of this science. B3: Identify the most important things that must be available in order to develop the cultivation and production of vegetable crops that must be researched and studied. A1: Mention the problems of vegetable production in Iraq.	Definition and native habitats of vegetable plants	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam
	3 Practical	A: Among the most important factors to be taken into consideration when establishing a vegetable field.	vegetable crops	Assignment and report	Short exams and homework assignments
2	2 Theoretical	A: Identify greenhouses and list their advantages and disadvantages. B2: Explain the shape, design, and orientation of the house.	Nursery and transplanting operations	Interactive lecture, brainstorming, dialogue and	Midterm Exam 1, Final Exam



		A: Identify greenhouses and list their advantages and disadvantages. B: Explain the shape, design, and orientation of the house. B: Explain the shape of the wooden canopy and the cold and hot dormers.		discussion, self-learning	
	3 Practical	A: Define seed and vegetative reproduction and mention their advantages and disadvantages.	Vegetable crop propagation	Assignment and report	Short exams, homework assignments, discussions
3	2 Theoretical	B: Explain the economic importance of vegetable crops. B: Explain the importance of vegetable crops in terms of nutritional value. C: Classify vegetable crops according to the botanical classification based on the structural and anatomical characteristics of the plants.	Vegetable crop classification	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam
	3 Practical	B: Number of ways to place seeds in the soil	Vegetable seed planting methods	Assignment and report	Short exams, homework assignments, discussions
4	Theoretical	A: Know vegetative reproduction. Mention its advantages. C: List the methods of vegetative reproduction. A: Know sexual reproduction. Mention the characteristics of good seeds. B: Explain the methods of planting seeds. A: Know transplanting and acclimatization. B: List the changes that occur to seedlings after acclimatization. C: List the methods of acclimatization.	Vegetable crop propagation	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam
	3 Practical	B: Classify vegetable crops according to their ability to tolerate transplanting.	Vegetable nursery	Assignment and report	Short exams, homework assignments, discussions
5	2 Theoretical	A: Knows patching A: Knows thinning A: Knows weeding B: Explains the harms of not weeding and its benefits to the plant A: Knows mulching A: Mentions the benefits of mulching A: Mentions the benefits of exporting	Agricultural operations in vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 1, Final Exam, Report
	3 Practical	B: Number of Harding methods	Harding	Assignment and report	Short exams, homework assignments, discussions
6	2 Theoretical	A: Identify fertilizers B: Explain the importance of fertilizers for plants C: List the types of fertilizers A: Mention the benefits of animal fertilizers B: Explain how to prepare animal fertilizers A: Mention the benefits of green fertilizers B: Explain how to use green fertilizers C: Classify chemical fertilizers B: Explain how to analyze fertilizers C: Classify nitrogenous, phosphate, and potassium fertilizers according to their composition	Fertilizing vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	short test, final test
	3 Practical	B: Number of weed control methods	Agricultural	Assignment and	Short exams,



			operations in vegetable crops	report	homework assignments, discussions
7	2 Theoretical	A: Mention the most important factors affecting the absorption process by leaves. B: Explain how factors affect absorption by leaves. B: Explain methods for diagnosing the fertilizer needs of vegetable crops.	Methods of adding fertilizers	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 2, Final Exam
	3 Practical	B: Design a three-year crop rotation.	Agricultural Rotation	Assignment and report	Short exams, homework assignments, discussions
8	2 Theoretical	B: Explain the effect of irrigation and irrigation intervals on plants. A: Mention the advantages and disadvantages of irrigation methods. B: Explain propagation methods in detail. C: List irrigation methods.	Irrigation in vegetable crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 2, Final Exam
	3 Practical	B: Explain the nature of growth, root system, stem, leaves, flowers, pollination, and varieties. B: Field experiments for growing cabbage, cauliflower, radish, and turnips.	The Crusader family	Assignment and report	Short exams, homework assignments, discussions
9	2 Theoretical	B: Morphological description of Cucurbitaceae crops B: Methods of propagation, pollination, ripening, and storage	Cucurbitaceae family	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 2, Final Exam
	3 Practical	B: Explain the nature of growth, root system, stem, leaves, flowers, pollination, and varieties. B: Field experiments on broad bean cultivation.	legume family	Assignment and report	Short exams, homework assignments, discussions
10	2 Theoretical	B: Morphological description of Cucurbitaceae crops B: Methods of propagation, pollination, ripening, and storage	melon	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Midterm Exam 2
	3 Practical	B: Demonstrates the nature of growth, root system, stem, leaves, flowers, pollination, and varieties. B: Field experiments for growing beets and spinach.	The Beet family Chenopodiaceae	Assignment and report	Short exams, homework assignments, discussions
11	2 Theoretical	B: Shows the morphological description of the narcissus family. B: Explains the methods of reproduction, pollination, ripening, and storage.	Alliaceae family	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Final exam
	3 Practical	B: Explain the nature of growth, root system, stem, leaves, flowers, pollination, and varieties. B: Field experiments for growing onions and garlic.	Alliaceae family	Assignment and report	Short exams, homework assignments, discussions
12	2 Theoretical	B: Shows the morphological description of the Solanaceae crops. B: Shows the methods of propagation, pollination, ripening, and storage.	Solanaceae family	Interactive lecture, brainstorming, dialogue and	Final exam

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				discussion, self-learning	
	3 Practical	B: Demonstrates the nature of growth, root system, stem, leaves, flowers, pollination, and varieties. B4: Field experiments for growing lettuce and carrots.	The composite family, the Umbelliferae family	Assignment and report	Short exams, homework assignments, discussions
13	2 Theoretical	B: Shows the morphological description of legume crops. B: Shows the methods of reproduction, pollination, ripening, and storage.	legume family	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Final exam
	3 Practical	B: Explain the nature of growth, the root system, the stem, leaves, flowers, pollination, and varieties. B4: Field experiments for growing tomatoes, peppers, eggplant, and potatoes.	Solanaceae family	Assignment and report	Short exams, homework assignments, discussions
14	2 Theoretical	B: Shows the morphological description of cruciferous crops. B: Shows the methods of reproduction, pollination, ripening, and storage.	The Crusader family	Interactive lecture, brainstorming, dialogue and discussion, self-learning	short test, final test
	3 Practical	Examination and discussion of students' reports	midterm exam	Assignment and report	Field evaluation
15	2 Theoretical	PowerPoint presentation on plants and a scientific visit to the private horticulture station and nurseries	PowerPoint presentation on plants and a scientific visit to the private horticulture station and nurseries	Interactive lecture, brainstorming, dialogue and discussion, self-learning	Scientific visit
	3 Practical	PowerPoint presentation on plants and a scientific visit to the private horticulture station and nurseries	Problem solving	Interactive lecture, brainstorming, dialogue and discussion, field training, 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	5.5	5.5
15	Final practical test	Final semester exams	20	20

Total	100	100%	100%
12. Learning and Teaching Resources			
Required textbooks (curricular books, if any)	Vegetable Production Parts 1 and 2		
Main references (sources)	<ul style="list-style-type: none"> <li>- Dr. Adnan Nasser Matloub. 1985. Vegetable Production: Part One. Dar Al-Kutub for Printing and Publishing.</li> <li>- Matloub, Adnan Nasser (1988) Vegetable Production 2: Dar Al-Kutub for Printing and Publishing, University of Mosul, Republic of Iraq.</li> <li>Hassan, Ahmed Abdel Moneim (2017) Basics of Vegetable Production: Arab House for Publishing and Distribution, First Edition, Cairo, Arab Republic of Egypt.</li> </ul>		
Recommended books and references (scientific journals, reports...)	Vegetables production Plant physiology		
Electronic References, Websites	Ketabpedia.com		



**Theoretical subject teacher**  
**Lecturer**  
**Dr. Safwan Mohammed Hajem**



**Practical subject teacher**  
**Lecturer**  
**Dr. Mohanad Aqil Ahmed**



**Head of Department**  
**Professor**  
**Dr. Khalid Anwar Khalid**



**Chairman of scientific committee**  
**Professor**  
**Dr. Abdlkader Absh Sbak**

