Course Description Form

1. Course Name:	
Horticultural plant insects	
2. Course Code:	
HOIN426	
3. Semester / Year:	
Spring/ 4th	
4. Description Preparation Date: quarterly	
1/2/2025	
5. Available Attendance Forms:	
In-person + Online	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 (Hours) / 3.5 (Units)	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr.juhina idees M. ali Email:dr.juhina_a.m@uomosul.edu.iq Asst. Lect. Ahmad Thameer Hamady	
8. Course Objectives	
1- Asking students deductive questions 2-Developing training programs 3- Finding solutions to the problems and obstacles that students encounter in the practical part 4- Enabling students to find solutions and applications for crises	• The course aims to prepare graduates in plant protection sciences who are familiar with the basic principles of entomology, in terms of their harm to the agricultural environment and their benefits, on the other hand, as well as their forms and how to distinguish them from other organisms close to them. The course also aims to become familiar with the structures of these external living organisms and to know their internal bodily systems. in detail
9. Teaching and Learning Strategies	
Strategy	1- Providing students with the basics and additional topics related to insect classification 2 - Asking students to ask a set of thinking questions during the lecture 3- Giving students homework that requires self-explanation in causal ways.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical 3 Practical	Theoretical: a1: The student recalls an introduction to entomology and the factors that contributed to the spread of insects. Practical: a1: The student recalls the characteristics of the insect class, the body sections of an insect, the head, and its appendages.	Theoretical: Introduction to entomology, factors that contributed to the spread of insects, pests, their types and damages, benefits and damages of insects. Practical: Characteristics of the insect class, body sections of an insect, the head, and its appendages.	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
2	2 Theoretical 3 Practical	Theoretical: a2: The student reviews the life characteristics of insects, mating in insects, their reproduction methods, and types of insect hibernation. Practical: a2: The student reviews the life characteristics of insects, mating in insects, and their reproduction methods, types of insect hibernation	Theoretical: Life characteristics of insects, egg stage, nymph stage and larva stage, pupa stage, adult insect stage, mating in insects, reproduction methods, types of insect hibernation. Practical: The thorax and its appendages.	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
3	2 Theoretical 3 Practical	Theoretical: a3: The student discusses the principles of pest control. Practical: a3: The student discusses the abdominal region and its appendages, and the types of	Theoretical: Principles of pest control, methods of pest control. Practical: Abdomen and its appendages, metamorphosis (development in	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.

		metamorphosis in insects.	insects and its types).		
4	2 Theoretical 3 Practical	Theoretical: b1: The student identifies fruit tree insects, apple tree insects. Practical: b2: The student evaluates apple insects, observing the appearance of infestation and damage, and describing the insect.	Theoretical: Fruit tree insects, apple tree insects. Practical: Appearance of infestation and damage, and insect description (apple insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
5	2 Theoretical 3 Practical	Theoretical: b2: The student evaluates olive tree insects, pistachio tree insects and green kernels. Practical: d1: The student classifies olive tree insects, pistachio tree insects and green kernels in terms of the appearance of infestation and damage, and insect description.	Theoretical: Olive tree insects, pistachio tree insects and green kernels. Practical: Appearance of infestation and damage, and insect description (olive insects, pistachio insects and green kernel insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
6	2 Theoretical 3 Practical	Theoretical: c1: The student explains grape insects. Practical: c2: The student classifies grape insects based on the appearance of infestation and damage, and insect description.	Theoretical: Grape insects. Practical: Appearance of infestation and damage, and insect description (grape insects)	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.

7	2 Theoretical 3 Practical	Theoretical: c3: The student interacts with stone fruit tree insects. Practical: d2: The student collects stone fruit tree insects and distinguishes between the appearance of infestation and damage resulting from the insect, and insect description.	Theoretical: Stone fruit tree insects. Practical: Appearance of infestation and damage, and insect description (stone fruit tree insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
8	2 Theoretical 3 Practical	Theoretical: c4: The student compares pomegranate insects and fig insects. Practical: c3: The student classifies pomegranate insects and fig insects based on the appearance of infestation and damage, and insect description.	Theoretical: Pomegranate insects, fig insects. Practical: Appearance of infestation and damage, and insect description (pomegranate insects and fig insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
9	2 Theoretical 3 Practical	Theoretical: b3: The student distinguishes between citrus insects and palm insects. Practical: b4: The student demonstrates skills in distinguishing between the appearance of infestation and damage, and insect description for citrus insects and palm insects.	Theoretical: Citrus insects, palm insects. Practical: Appearance of infestation and damage, and insect description (citrus insects and palm insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.

10	2 Theoretical 3 Practical	Theoretical: b5: The student identifies vegetable insects, legume family insects. Practical: b3: The student distinguishes between legume family insects in terms of the appearance of infestation and damage, and insect description.	Theoretical: Vegetable insects, legume family insects. Practical: Appearance of infestation and damage, and insect description (legume family insects)	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
11	2 Theoretical 3 Practical	Theoretical: c3: The student classifies cucurbit family insects and cruciferous family insects. Practical: b3: The student distinguishes between the appearance of infestation and damage, and insect description for cucurbit family insects and cruciferous family insects.	Theoretical: Cucurbit family insects, cruciferous family insects. Practical: Appearance of infestation and damage, and insect description (cucurbit family insects and cruciferous family insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
12	2 Theoretical 3 Practical	Theoretical: d3: The student classifies nightshade family insects. Practical: d2: The student collects nightshade family insects based on the appearance of infestation and damage, and insect description.	Theoretical: Nightshade family insects. Practical: Appearance of infestation and damage, and insect description (nightshade family insects)	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.

13	2 Theoretical 3 Practical	Theoretical: d4: The student leads discussions on mallow family, amaranth family, and lily family insects. Practical: d1: The student classifies insects from the mallow family, amaranth family, and lily family based on the appearance of infestation and damage, and insect description.	Theoretical: Insects of the mallow family, amaranth family, and lily family. Practical: Appearance of infestation and damage, and insect description (insects of the mallow family, amaranth family, and lily family).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
14	2 Theoretical 3 Practical	Theoretical: b5: The student identifies ornamental plant insects and horticultural plant insects. Practical: e1: The student provides a clear description of ornamental plant insects and horticultural plant insects through the appearance of infestation and damage, and insect description.	Theoretical: Ornamental plant insects, horticultural plant insects. Practical: Appearance of infestation and damage, and insect description (ornamental plant insects and horticultural plant insects).	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.
15	2 Theoretical 3 Practical	Theoretical: Field visit to fruit orchards, vegetable crop fields, and nurseries. Practical: Field visit to fruit orchards, vegetable crop fields, and nurseries.	Theoretical: Field visit to fruit orchards, vegetable crop fields, and nurseries. Practical: Field visit to fruit	Theoretical: Auditory methods, whiteboard writing, direct dialogue. Practical: Assignment of tasks and reports.	(Short quizzes, first and final midterms), homework assignments, discussions.

11. Course evaluation	
11. Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily oral, monthly, written exams, reports, etc.	
12. Learning and teaching resources	
Required Texts	- Orchard Insects Book - Book of Economic Insects in Northern Iraq - Book of field crop insects
Recommended Texts	Recommended books and references (scientific journals, reports...)
Websites	Electronic References, Websites

مدرس المادة النظري

أ.د. جهينة ادريس محمد علي

مدرس المادة العملي

م.م. احمد ثامر حمادي