Course Description Form

1. Course Name:
Integrated pest management
2. Course Code:
INPM427
3. Semester / Year:
FIRSTsemester/FOURTH stage/2023-2024
4. Description Preparation Date:
1-2-2024
5. Available Attendance Forms:
Classroom
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours theory / 3 hours practical (5 hours) / 3 units
7. Course administrator's name (mention all, if more than one name)
Name: 1- Dr. SADDAM MOWAFAK HASSAN Email: DR.SADDAM_HASSAN@uomosul.edu.iq
8. Course Objectives

Course Objectives

• Introducing students to the common types of Nematode and their effect on crops, and explaining their transmission methods and infection mechanisms.

• Provide an understanding of the basic biology and ecology of Nematode, with an emphasis on the impact of environmental factors on their spread and development.

• Students learned the skills of diagnosing caecilian infections and analyzing the factors affecting them, using laboratory tests and field observation.

• Study means and methods of prevention and control of Nematode, including the use of pesticides advanced agricultural techniques such as biological control.

• Analyze the economic and environmental impacts ofpest, and study sustainable and preventive management methods to reduce their impact on crops and the environment.

• Enhancing students' skills in planning and implementing field experiments and scientific studies to effectively treat and control caecilian infestations.

• Encouraging students to research and interact with modern literature and research in the field ofpest, and to contribute to developing innovative solutions to meet current challenges in this field.

9. Teaching and Learning Strategies	
Strategy	• Brainstorming • Teamwork • Discussion

	• Discovery learning • Problem solving or problem-based learning • E-Learning • Practical field training • Think, discuss, share

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	2 Theoretical	A1 Knows the pest, its divisions, and its harms	Definition of the pest - classification of pests according to economic importance and feeding behavior - damage caused by pests	Interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 1, final test
٢	2 Theoretical	A1 knows a historical overview of agricultural pests	Theoretical: A historical overview of agricultural pest management - the concept or definition of integrated pest management - the reasons leading to the adoption of a pest management system - the objectives of the pest management system - the main elements of integrated pest management	interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 1, final test
٣	2 Theoretical	b 1 Number of survey methods and factors affecting the samples	Theoretical: methods of field survey and sampling - factors affecting the field sample - sampling and observer methods	Interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 1, final test
4	2Theoretical	b2 Write a report on injury estimation methods	Theoretical: Methods for estimating infestation and how to calculate pest density on different crops	Interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 1, final test

5	2Theoretical	b2Write a report on agricultural pest infections	Theoretical: How to prepare reports on infestations and estimate pest density - Sampling methods for pests that live below the surface of the soil and aquatic insects	, interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 1, final test, report.
6	2Theoretical	Theoretica b2Write a report on agricultural pest infections	Theoretical: How to prepare reports on infestation and estimate pest density - Sampling methods for pests that live and feed on plants.	interactive lecture, brainstorming, dialogue and discussion, self-learning	short test, final test
٧	2Theoretical	Theoretical a3 Understand the critical economic limit and the factors affecting it	Theorecal Theoretical: The critical economic limit - The history of the critical economic limit. Population density levels of pests according to economic importance - Methods of estimating it and the factors determining the use of the critical limits - Examples of expressing the values of the critical economic limit.	interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 2, final test
8	2Theorecal	Theoretical: a4Knows the factors that must be taken into account when determining the critical economic limit	Theory: Factors that must be taken into consideration when estimating the critical economic limit of a pest - the benefits of applying the economic critical limit	interactive lecture, brainstorming, dialogue and discussion	self-learning, semester test 2, final test

9	2Theoretical	a4 is familiar with applied control methods	Theoretical: Applied control methods - the role of agricultural operations and their applications in integrated pest management programs	Interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 2, fina test.
10	2Theoretical	Theoical A4 is familiar with physical and chemical control methods	Theoretical: Physical and mechanical means used in integrated pest control management programs	interactive lecture, brainstorming, dialogue and discussion, self-learning	semester test 2, final test.
11	2Theoretical	Theoretical: A4 is familiar with physical and chemical control methods	Theoretical: Physical and mechanical means used in integrated pest control management programs	interactive lecture, brainstorming, dialogue and discussion, self-learning	final exam
12	2Theoretical	Th eoretical: a3 Understands legislative control and its means	Theoretical: Regulatory and legislative control in integrated pest control management programs - Legislative methods and agricultural quarantine - Objectives of agricultural quarantine	Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning.	final exam
				Interactive lecture, brainstorming, dialogue and discussion, field training, practical exercises, self-learning	short practical test.

13	2Theoretical	Theoretical: A2 Explains the role of biological control in pest control	Theoretical: The role of biological control in the pest management system - insect parasites - predators - characteristics that must be present in successful biological enemies - benefits or benefits of using biological control strategies - methods used in biological control programs - bacterial control (pathogens) of insects - characteristics Must be present in the successful pathogen	Dialogue and discussion, self-learning	Report
14	2Theoretical	T b2 Writes a report on the features and benefits of bacterial control heoretical:	Theoretical: Advantages and benefits of bacterial control - disadvantages and difficulties of bacterial control - bacteria - fungi - viruses - snakeworms (nematodes) - insect-pathogenic protozoa	Interactive lecture, brainstorming, dialogue and discussion, self-learning	report.

15	2 Theoretical	Theoreticab2 Writes a report on agricultural pesticides and their role in pest controll:	Theoretical: Insecticides in the insect pest management system - the relationship between dose, concentration, and toxicity - the toxic effect of pesticides - the principles adopted in dividing pesticides - the general principles in selecting pesticides - the principles adopted in dividing insecticides.	Brainstorming, dialogue and discussion, self-learning	Report

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

جامعة الموصل
كلية [illegible] الغابات
قسم وقاية النبات

The theoretical subject teacher

Dr.saddam mowafak hassan

Chairman of the Scientific Committee

Dr. Juhayna Idris Mohamed,

Head of the Plant Protection Department

Dr. Firas Kadhim AlJuboori