Course Description Form

1. Course Name:

Stored Products Pests

2. Course Code:

STPP419

3. Semester / Year:

2th 2024

4. Description Preparation Date: quarterly

1/2/2024

5. Available Attendance Forms: groups

Groups

6. Number of Credit Hours (Total) / Number of Units (Total)75

75

7. Course administrator's name (mention all, if more than one name)

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8. Course Objectives

1. **Ask questions of conclusiveness at all.**
2. **Development of training programmes.**
3. **Finding solutions to students' problems and constraints in the uncle.**
4. **Enabling students to find solutions and applications for outstanding attitudes.**

9. Teaching and Learning Strategies

-Provide students with additional basics and topics related to biological resistance.
-Students asked a range of questions during the course.
-Giving students home duties requires self-explanations in ways of cause.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5	Theortical : A1: Introduction - The importance of	Introduction - The importance of grains	Display data on grain storage and traditional methods of grain storage	

		grains Practical : C1: Introduction to cereals, nutritional value of cereals and associated deterioration and spoilage for stored grain	Introduction to cereals, nutritional value of cereals and associated deterioration and spoilage for stored grain		
2	5	Theortical A1: Storage and methods of storing grains, grain spoilage phenomena Practical: C1: Insect groups to which store pests belong	Storage and methods of storing grains, grain spoilage phenomena Insect groups to which store pests belong	Show photos and video	
3	5	Theortical: D3: Estimation of moisture in grains and their products, insect damage to stored materials, methods for estimating moisture content Practical: C1: Functional and structural adaptation of store house insects to the most important sources of infestation	Estimation of moisture in grains and their products, insect damage to stored materials, methods for estimating moisture content Functional and structural adaptation of store house insects to the most important sources of infestation	methods for estimating moisture content	
4	5	Theortical: A1: Losses resulting from insect pests of grains and their products. Pictures and diagrams of insect damage to warehouses Practical: C1 : Seasonal exam	Losses resulting from insect pests of grains and their products. Pictures and diagrams of insect damage to warehouses Seasonal exam	Pictures and diagrams of insect damage to warehouses	

5	5	Theortical: A1: Groups of insects of stored materials, examples of groups of warehouse insects and their types Practical: C1: Methods used in the labratiry to detect infections that from inside the grains	Groups of insects of stored materials, examples of groups of warehouse insects and their types Methods used in the labratiry to detect infections that from inside the grains	examples of groups of warehouse insects and their types	
6	5	Theortical A1: The life of grain insects and economically important stored materials in Iraq, the environment of grain insects and their costs, displaying the cycles of warehouse insects via the Dacho projector Practical: C1: Biology of some warehouse pests (penetration of small grain and khabra)	The life of grain insects and economically important stored materials in Iraq, the environment of grain insects and their costs, displaying the cycles of warehouse insects via the Dacho projector. Biology of some warehouse pests (penetration of small grain and khabra)	The life of grain insects and economically important stored materials in Iraq, the environment of grain insects and their costs, displaying the cycles of warehouse insects via the Dacho projector.	
7	5	Theortical A1: Environmental factors and their relationship to insects of stored materials, insect population in Practical: C1: Rusty and similar flour beetls (saw grain beetle)	Environmental factors and their relationship to insects of stored materials, insect population in Rusty and similar flour beetls (saw grain beetle)	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	

8	5	Theortical A1: Sources of warehouse insect infestation, Practical: C1: Cheese fly and small fruit	Sources of warehouse insect infestation, Cheese fly and small fruit fly	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
9	5	Theortical A1: Selecting stored grain insects for their preferred hosts Practical: C1: Indian flour moth and spider beele	Selecting stored grain insects for their preferred hosts Indian flour moth and spider beele	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
10	5	Theortical: A1: Methods of controlling insects in grains and stored materials Practical: C1: Book louse cigarette or tobacco beetle	Methods of controlling insects in grains and stored materials Book louse cigarette or tobacco beetle	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
11	5	Theortical: A1: Traditional methods of pest control Practical: C1: Leather and cheese crushed grain beetle	Traditional methods of pest control Leather and cheese crushed grain beetle	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
12	5	Theortical: D3: Modern methods of control include Practical: C1: The difference between true weevil and grain weevil (rice	Modern methods of control include The difference between true weevil and grain weevil (rice weevil , grain weevil)	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	

		weevil , grain weevil)			
13	5	Theortical: A1: Chemical control: pesticides – fumes Practical: C1: Dry fruit beetle , legume beetle	Chemical control: pesticides – fumes Dry fruit beetle , legume beetle	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
14	5	Theortical: A1: An overview of non-insect pests that infect warehouses Practical: C1: Arachnids (dream flour)	An overview of non-insect pests that infect warehouses Arachnids (dream flour)	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	
15	5	Theortical: D3: A brief idea about rodents and ways to combat them Practical: C1: Rodents and their harm	A brief idea about rodents and ways to combat them Rodents and their harm	warehouses, a detailed explanation of the environmental factors that affect the lives of warehouse insects.	

11. Course Evaluation

	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	1 final theoretical report + theoreticalpractical experience reports	My theory is week 15 My work week is 1-15	7Theoretical + 6Practical	13 %
2	Short test 1	Week 3	4Theoretical + 2Practical	6%
3	Midterm test (theoretical and practical)	Week 9	10 theoretical +5 practical	15%
4	Short test 2	Week 12	4 Theoretical + 2Practical	6 %
5	Final practical test	Practical exams week	20	20%
6	Final theoretical test	The week of theoretical exams	40	40%
	the total		100	100%

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Book of warehouse insects and methods of combating them, Prof. Dr. Riyad Al-Iraqi. 2010 A book on warehouse insects, their importance and ways to combat them Mr. Dr. Iyad Ismail 2014
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Instructor of theoritical part

Dr. Emad Q. Mohammed Alebady

Instructor of practical part

Ekhlas Ziyad Mohammed

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