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)
Name: Dr. Emad Q. Mohammed Alebady Email: emad_alebady@uomosul.edu.iq Ekhlas Ziyad Mohammed Email: ekhlas.1977@uomosul.edu.iq

8. Course Objectives	
Course Objectives	• **Objectives of the course 1. A questions of conclusiveness at all** • **Development of training programme** • **Finding solutions to stude problems and constraints in the un** • **4. Enabling students to find soluti and applications for outstand attitudes**

9. Teaching and Learning Strategies	
Strategy	- Provide students with additional basics and topics related biological resistance - Students asked a range of questions during the course - Giving students home duties requires self-explanations 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 grains Practical : C1: Introduction to cere nutritional value cereals and associ deterioration spoilage for stored gra	Introduction - The importance of grains Introduction to cereals, nutriti value of cereals and associ deterioration and spoilage for st grain	Display data on grain storage and traditional methods of grain storage	
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 moisture in gra and their produ insect damage stored materi methods estimating moist content Practical: C1: Functional structural adaptat of store house inse to the most import sources of infestat	Estimation of moisture grains and their produ insect damage to sto materials, methods estimating moisture conten Functional and structu adaptation of store ho insects to the most import sources of infestation	methods for estimat moisture content	
4	5	Theortical: A1: Losses result from insect pests grains and th products. Pictu and diagrams insect damage warehouses	Losses resulting from ins pests of grains and th products. Pictures diagrams of insect damage warehouses Seasonal exam	Pictures and diagra of insect damage warehouses	

		Practical: C1 : Seasonal exa			
5	5	Theortical: A1: Groups insects of sto materials, examp of groups warehouse inse and their types Practical: C1: Methods used in the labratiry to detect infections that from inside the grains	Groups of insects of sto materials, examples of gro of warehouse insects and th types Methods used in the labra to detect infections that fr inside the grains	examples of groups warehouse insects a their types	
6	5	Theortical A1: The life of gr insects economically important sto materials in Iraq, environment of gr insects and th costs, displaying cycles of wareho insects via the Da projector Practical: C1: Biology of some warehouse pests (penetration of small grain and khabra)	The life of grain insects economically import stored materials in Iraq, environment of grain inse and their costs, displaying cycles of warehouse inse via the Dacho projector. Biology of some wareho pests (penetration of sn grain and khabra)	The life of grain inse and economica important sto materials in Iraq, environment of gr insects and their co displaying the cycles warehouse insects the Dacho projector.	
7	5	Theortical A1: Environmer factors and th relationship insects of sto materials, ins population in Practical: C1: Rusty and similar flour beetls (saw grain beetle)	Environmental factors their relationship to insects stored materials, ins population in Rusty and similar flour be (saw grain beetle)	warehouses, a detai explanation of environmental fact that affect the lives warehouse insects.	
8	5	Theortical A1: Sources of warehouse	Sources of warehouse insect infestation,	warehouses, a detai explanation of environmental fact	

		insect infestation, Practical: C1: Cheese fly a small fruit	Cheese fly and small fruit f	that affect the lives 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 detai explanation of environmental fact that affect the lives 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 detai explanation of environmental fact that affect the lives 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 detai explanation of environmental fact that affect the lives warehouse insects.	
12	5	Theortical: D3: Modern methods of control include Practical: C1: The difference between true weevil and grain weevil (rice weevil , grain	Modern methods of control include The difference between true weevil and grain weevil (rice weevil , grain weevil)	warehouses, a detai explanation of environmental fact that affect the lives warehouse insects.	

		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 detai explanation of environmental fact that affect the lives 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 detai explanation of environmental fact that affect the lives 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 detai explanation of environmental fact that affect the lives 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

Chairman of the scientific committee

Prof. Dr. Moafak mahmood ahmed

Head of the department of Food science

Prof. Dr. Sumaya khalaf badawi