

Course Description Form

1. Course Name:	
Principles of Entomology 2	
2. Course Code:	
PRPE124	
3. Semester / Year:	
1 st	
4. Description Preparation Date:	
quarterly 1/2/2024	
5. Available Attendance Forms:	
Blended education	
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. rena reiyadh faleh Email: renna.reiyadh@uomosul.edu.iq	
8. Course Objectives	
<p>Theoretical:</p> <ul style="list-style-type: none">-Enabling the student to understand and understand the physiological structure of insects.-Enable the student to distinguish between different types of vital organs Inside the insect's body.-Enable the student to know the structure of each device inside the insect's body.-Enable the student to become familiar with the function of each device inside the insect's body <p>These devices are useful for the continuation and sustainability of insects.</p>	<p>Practical:</p> <ul style="list-style-type: none">- Enabling the student to become familiar with the most important laboratory methods for identifying and distinguishing between the various insect body systems through various practical experiments.
9. Teaching and Learning Strategies	
<p>Theoretical:</p> <ul style="list-style-type: none">- Interactive lecture- Brainstorming- Assignment of tasks and report- Presentations of models of insect body systems.	<p>Practical:</p> <ul style="list-style-type: none">- Commissioning teamwork to uncover leadership skills- Assignment of tasks and report for each experience

-Presentation of installation models for each device and the function of the device in relation to the insect.
- Dialogue and discussion

10. Course Structure

We ek	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 3	Theoretical b1: Shows the study of the digestive system, the digestive tract and its structure in insects. Practical a1: Familiar with the digestive system and its appendages	Theoretical: Digestive system, alimentary canal and appendages in insects. Practical: Anatomy of insects to observe the digestive system and its appendages	Theoretical: Audio Methods Writing Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
2	2 3	Theoretical b2: Explains the salivary glands and the digestive process in insects. Practical a2: Recognizes the types of digestive systems and nutrition	Theoretical: Salivary glands, digestion in insects Practical: Watch some differences in the digestive system while dissecting different feeding insects and observing the changes in the digestive system	Theoretical: Audio Methods Writing Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
3	2 3	Theoretical b3: Examines the excretory system. Practical a2: Identify the types of excretory organs in insects	Theoretical: excretory system Practical: During the dissection of the insect, some excretory organs can be seen	Theoretical: Audio Methods Writing Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
4	2 3	Theoretical a1: Familiarity with the muscular system Practical b4: Writes a report on the muscular system in insects	Theoretical: Muscular system Practical: Muscle types in insects.	Theoretical: Audio Methods Writing Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions

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5	2Theoretical 3 Practical	Theoretical b5: suggested to familiarize yourself with the circulatory system. Practical b6: views the circulatory system in insects under a microscope	Theoretical: Circulatory system Practical: Anatomy of the insect, observing the heart, its location in relation to the insect's body, and the number of chambers in addition to the aorta	Theoretical: Audio Methods Writ Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
6	2Theoretical 3 Practical	Theoretical a2: Learn about blood functions and blood cell types. Practical c1: Be able to differentiate blood cells, their types and functions.	Theoretical: Blood cells, types and functions Practical: Blood cell types in insects.	Theoretical: Audio Methods Writ Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
7	2Theoretical 3 Practical	Theoretical a2: Learn about the respiratory system. Practical b7: Detects the respiratory system	Theoretical: Respiratory system. Practical: Types of respiration in insects.	Theoretical: Audio Methods Writ Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
8	2Theoretical 3 Practical	Theoretical: Field visit Practical: Field visit	Theoretical: Field visit Practical: Field visit	Theoretical: a reporting Practical: a reporting	Short Tests, Duty Assignment, Discussions
9	2Theoretical 3 Practical	Theoretical a2: Recognize the structure of spiracles. Practical b8: Draws the shape of the spiracles and their distribution on the insect's body	Theoretical: Structure of spiracles. Practical: The shape of the spiracles and their distribution on the insect's body	Theoretical: Audio Methods Writ Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
10	2Theoretical 3 Practical	Theoretical a2: Recognizes the nervous system. Practical b9: Distinguish between the types of nervous systems	Theoretical: Nervous system Practical: Divisions of the insect nervous system	Theoretical: Audio Methods Writ Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions

		in insects.			
11	2 Theoretical 3 Practical	Theoretical a2: Learn about the nervous system (sensory organs) Practical c10: Connects the form and types of sense organs in insects	Theoretical: Sense organs in insects. Practical: Sense organs types in insects	Theoretical: Audio Methods Writing Style On the board direct dialogue style Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
12	2 Theoretical 3 Practical	Theoretical b9: Distinguishes the reproductive system of insects Practical a2: Recognizes the types of reproductive system	Theoretical: Insect reproductive system Practical: Sexual dissection of an insect to observe the internal structure of the reproductive system in male and female insects	Theoretical: Audio Methods Writing Style On the board direct dialogue style. Practical: Assignment and reporting	Short Tests, Duty Assignment, Discussions
13	2 Theoretical 3 Practical	Theoretical d1: He leads a panel discussion on reproduction and growth in insects. Practical b11: Participates in insect dissection and making laboratory models.	Theoretical: Reproduction and development in insects. Practical: Anatomy of insects and making laboratory models.	Theoretical: Audio Methods Writing Style On the board direct dialogue style. Practical: Assignment and reporting.	Short Tests, Duty Assignment, Discussions
14	2 Theoretical 3 Practical	Theoretical b12: Establishes types of embryonic development. Practical c1: Be able to perform methods of hardening and dissecting insects according to the type of device studied.	Theoretical: Types of embryogenesis in insects. Practical: Methods of hardening and dissection of insects according to the type of device studied.	Theoretical: Audio Methods Writing Style On the board direct dialogue style. Practical: Assignment and reporting.	Short Tests, Duty Assignment, Discussions
15	2 Theoretical 3 Practical	Theoretical: Field visit Practical: Field visit	Theoretical: Field visit Practical: Field visit	Theoretical: a reporting Practical: a reporting	Short Tests, Duty Assignment, Discussions

11. Course Evaluation

	Calendar Methods	Calendar Date (Week)	Grade	Relative Weight%
1	Theoretical Final Report + Practical Experience Reports	Theoretical week 15 practical week 1-15	7 Theoretical + 6 Practical	13%
2	Short Test (1) Quiz	Week (2-5)	4Theoretical + 2 Practical	6%
3	Midterm Exam half-test (theoretical and practical)	Week (8,14)	10 Theoretical + 5 Practical	15%
4	Short Test (2) Quiz	Week(9-12)	4Theoretical + 2 Practical	6%
5	Final Practical Test	20	20	20%
6	Final theoretical test	40	40	40%
			100	

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	- General entomology / Muhammad Fouad Tawfiq
Main references (sources)	- Modern research in the field of insects - Books on the principles of entomology
Recommended books and references (scientific journals, reports...)	- Rev. APPLi. Entomol. - J. Economic Entomology
Electronic References, Websites	- Google research gate. - Google scoler.

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