

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty :
Name of Department:

Faculty of Science
Biological Sciences

اسم الكلية:
اسم القسم العلمي:

Course Name	Insect Physiology فسيولوجيا الحشرات	اسم المقرر
Course No.	0493-416	رقم المقرر
No. of Credits	3	عدد الوحدات
Theoretical Hours	2	عدد الساعات النظرية
Practical Hours	1	عدد الساعات المحلية
Course topics		مواضيع المقرر

Topic 1 Growth and locomotion:

Integument, cuticle, molting, muscle contraction, legs and locomotion, crawling, walking, swimming and flying, function of wings.

Topic 2 Alimentary canal and digestion:

Types of digestion, peritrophic membrane, filter chamber, microorganisms, body fat.

Topic 3 Gas exchange:

Function of tracheal system in terrestrial and aquatic insects

Topic 4 Excretion :

Toxic metabolic products , Malpighian tubules , osmoregulation , cryptonefric system .

Topic 5 Circulatory system :

Hemolymph, circulation , heart, immunity .

Topic 6 Light production:

Mechanisms and function .

Topic 7 External factors affecting insect metabolism :

Temperature and thermoregulation , photoperiod and diapause .

Topic 8 Nervous system:

Basic functioning, mediators, function of insect brain and CNS, controlling behaviour.

Topic 9 Sense organs :

Mechanoreception, chemoreception , thermoreception , photoreception and vision.

Topic 10 Endocrine system

Function and chemical structure of hormones, mode of action, pheromones, ecdysteroids and juvenile hormones.

Topic 11 Insect products

Function of silk glands, production of silk, honey, wax and venom .

Text book: (Name, Author , Year , Publisher) عنوان الكتاب : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)

James L. Nation, Sr. "Insect Physiology and Biochemistry" Fourth edition. CRC Press

References: (Name , Author , Year . Publisher) عنوان المرجع : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)

Course objectives

No.	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	Identify and describe the major physiological systems in insects	Endocrine system , sensory system and respiratory system	X		
2	The student will recognize unique organs within the insect and its role	Silk glands , wax and honey production	X		
3	The student will identify key structures in the insect and their function	Malpighian tubules function and tracheal system in terrestrial		X	
4	The student will compare various insect products and the ways are manufactured	Sik, wax, honey, and venom production		X	



5	The student will explain how do insect perceive light and chemical signals.	Insect sensory system and sense organ		x	
Fields					
Skills					
Coordinator (Name and Rank) :	Dr. Bedour Alsayegh (Assist. Prof.)				
Signature and stamp :	Bedour Alsayegh				
Date:	28 \ 11 \ 2025				