



المرحلة الثالثة
اسم التدريسي: د. رواء جعفر حميد
الشهادة الحاصل عليها: الدكتوراه
المادة علم الحشرات النظري

جامعة بغداد
كلية التربية للعلوم الصرفة (ابن الهيثم)
قسم علوم الحياة

الفصل الدراسي الاول

Weeks	Subject
1	General Entomology, Insects Damages, Benefits of insects.
2	External Morphology, Body wall or Integument, Body Segmentation of Insect, Insect Head.
3	Mouth Parts of Insects, Antennae, Functions of Antenna,
4	Compound and simple eyes, Cervix or Neck, Thorax, Insect Leg,
5	Insect Wings, Hypothetical Wing venation, Different Types of Wings, Wing coupling apparatus.
6	Abdomen.
7	Digestive system, The insect's digestive system, Stomatodeum (foregut), Forming of Stomatodeum, Function of Stomatodeum, Mesenteron (midgut), Forming of Mesenteron, Function of Mesenteron, Proctodeum (hindgut), Function of Proctodeum, The excretory system.
8	Circulatory system, Haemolymph, Function of the insect circulatory system, Function of Blood.
9	Respiratory system (Tracheal system), Forming of Respiratory system, Type of respiration.
10	Nervous system of insects, Nervous system structure.
11	Insect Sense Organs, Structure of the Ommatidium.
12	Reproductive System, Reproductive system of Female, Reproductive system of Male, Types of Reproduction.
13	Metamorphosis, Moulting or Ecdysis, Types of metamorphosis, Metamorphosis Equations.
14	Types of larvae and pupae, Differences between larva and nymph, Types of larva, Differences between Campodeiform and Scarabaeiform, Different types of polypod larvae, Types of Pupa, Pupae is divided on the following bases.

الفصل الدراسي الثاني

Weeks	Subject
1	Taxonomy, History of Taxonomy, Types of classification, Relation between taxonomy and biology, Taxonomic hierarchy.
2	Class: Insecta, Hexapoda: Six Legged, Exopterygota.
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4	Stick Insects.
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6	Endopterygota, Differences between moths and butterflies.
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9	Biology of Honeybees, Castes of Honeybees.
10	Biology of the Honeybee worker, Annual cycle of the colony