



Department of Biology

College of Education

University of Salahaddin University - Erbil

Subject: Entomology

Course Book – (Year 3)

Lecturer's name MSc. Sarhang Ismael Mustafa

Academic Year: 2022/2023

Course Book

1. Course name	General Entomology, Insects
2. Lecturer in charge	Sarhang Ismael Mustafa
3. Department/ College	Biology
4. Contact	Sarhang.mustafa@su.edu.krd Mobile No. 07514495252
5. Time (in hours) per week	For example Practical: 3 × 2 = 6 hours
6. Office hours	Daily from 8:30 to 2:00
7. Course code	
8. Teacher's academic profile	My Name is Sarhang Ismael Mustafa, I have BSc in BIOLOGY (Salahaddin Uni. 2008), Msc. in Parasitology (Salahaddin Uni. 2016). I'm an assistant lecturer of Parasitology Dept. of Biology college of Education
9. Keywords	General Entomology, Insects
<p>10. Course overview:</p> <p>Insects are the most diverse and abundant of all groups of arthropods. There are more species of insects than species of all other classes of animals combined. It's necessary for Entomologist students have information about such a huge group of insects.</p> <p>Introduction to plant protection includes two main topics; Entomology and Pathology. The current course will focus on the General Entomology, Since the 1st class students have no background about the Entomology, so this course will inform the students about the meaning of Entomology and kinds of Entomology, the relationship between insects, plants, animals and human.</p> <p>It's very important for students to know the structure of insects; Head, thorax and abdomen with appendages.</p> <p>Students will be familiar with the structure of insect's mouthpart, modifications of mouthparts, also the structure of antenna, wings and legs and their modifications and types of larval.</p> <p>This information will support the knowledge of students about the related subjects, for example; how insects feeding, how causing injury to plants, animals and Human and furthermore by getting information about mouthparts modifications, these information will increase their knowledge about the control of insects.</p> <p>By the end of this course the student will be familiar with the structure of insects and getting good background about General Entomology.</p>	

11. Course objective:

The current course aims to:

- 1- Students learn how to recognize insects depending on the general structure.
- 2- Students will have knowledge about the advantage and disadvantage of insects to human and their role in the environment.
- 3- Student will be familiar with the structure of insects and the modification of their appendages.
- 4- Studying the development and metamorphosis of insects with general information about their behavior.

12. Student's obligation

The student must have an important role:

- 1- The students must contribute in the scientific discussions in the class or teaching hall.
- 2- The students must know the importance of quizzes, homework, reports and exams.

It is necessary to contribute the student in presenting a scientific subject

13. Forms of teaching

There are different forms of teaching:

- 1- Datashow and power point.
- 2- White board.
- 3- Lectures.

14. Assessment scheme

The course degree was divided as follow %40 of monthly exam, %25 for theoretical part 15 for practical part in practical part 5 marks for the first exam, 5 marks for second exam, 5 marks for daily quiz and preparing reports. Final exam takes %60, 40 marks for theory and 20 for practical part.

15. Student learning outcome:

Course outcomes should clearly relate to topics, assignments, and exams that are covered in the present course. Course outcomes should be clear, measurable, use verbs (e.g., identify, explain,.).

16. Course Reading List and References:

- 1- Handbook of agricultural entomology (2013). Van Emden H.F. Wiley-Blackwell publication. UK.331 pages.
- 2- The Insect: An Outline of Entomology (2010). Gullan P. J. and Granston P.S. Wiley-Blackwell publication. UK. 590pp.
- 3- Urban Insects and Arachnids: a handbook of Urban Entomology (2005).Robinson W.H. Cambridge Univ. Press, New York. 481 pp.
- 4- Principle of general entomology (2014). B. M. Al-Azawi and M. A. Al-Salihi, Dar ADNAN Publishing House. Univ. Mustansiriyyah, Iraq. 224pp.

17. The Topics:		Lecturer's name
Weeks	Subjects	
1	Kingdoms of the World Kingdom: Animal (and its phyla , classes and orders)	
2	Collecting and Preserving Insects: (Methods, equipment and Requirements.	
3-4	Insect Morphology : Body Regions : The head and its appendages -Insects antennae	
5	-The Insects mouth Parts. -Modifications of mouth parts.	
6	The Thorax: its appendages -The insect wings and its Modifications.	
7	-The Insects Legs Morphology. -The Modifications of The Legs.	
8	The Insects Abdomen: Morphology The appendages of Insects abdomen. -reproductive appendages and non-reproductive appendages.	
9-10	-The Insects Development (Metamorphosis) -Types of insect Larvae -Types of Insect Pupae	
11	Insect Digestive system	
12	Insect respiratory system	
13	Insect circulatory system	
14	Orders (order: coleoptera)	

18. Practical Topics (If there is any)

There are three main and important skills the students should learn they are power point, excel and world that led them dealing with computer and internet

19. Examinations:

- Typical Exam. Questions:
- Identify this sample in front of you?
- Numerate the types of (mouth parts) with examples?
- Define the following terms?
1- antenna 2- metamorphosis 3- pupa
- What are the types of antenna?
- What are the orientations of insects head (mouth parts)?

20. Extra notes:

21. Peer review

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