

Department of General science College of Basic Education University of Salahaddin Subject: Invertebrate and Vertebrate Course Book – (4<sup>th</sup> Grade) Lecturer's name: Dr. Suhaira Waleed Abdullah Academic Year: 2022-2023

1. Course name	Invertebrate and Vertebrate
2. Lecturer in charge	Dr.Suhaira Waleed Abdullah
3. Department/ College	General science/Basic education college
4. Contact	e-mail: suhaira.abdullah@su.edu.krd
	Tel: 07512240145
5. Time (in hours) per week	Theory: 3hours
6. Office hours	8.30 am - 10.30 am (A) in Sunday +1 hour in Thursday
	10.30 am - 12.30 pm (B) in Sunday +1 hour in Thursday
7. Course code	
8. Teacher's academic profile	Lecturer of Zoology, Invertebrate and Vertebrate, Academic
	debate.
9. Keywords	

# **Course Book**

10. Course overview:

This course is an introduction to various vertebrate and invertebrate animals, their evolutionary relationships, and biology including anatomy and physiology, behavior, and ecology. It is a guided tour through the complex and diverse world of animals. Although it covers a lot of ground, the subject is so large that it is impossible to cover all aspects. Thus, the course represents a sampling of various taxonomic groups and related biological topics. The course is a gate-way or foundation course for majors in zoology or other biologically-related fields.. Most students find the subject to be fascinating and fun but also challenging and demanding because of the material's diversity, complexity, number of new, unfamiliar topics, and associated names and terms -- almost like learning a new language for most people.

11. Course objective:

- 1. Students will learn to recognize and be able to classify the major (common, economically or medically important, evolutionarily significant, or for other reasons) groups of animals.
- 2. Students will learn specialized terminology and basic concepts of zoology.
- 3. Students will learn evolutionary relationships among the different groups.
- 4. Students will learn basic, selected external and internal structure and associated biology/function for different kinds of animals.
- 5. Students will come to appreciate and enjoy the subject of zoology (i.e., have fun) and be able to place the subject in the larger context of human knowledge and experience on a global scale.
- 12. Student's obligation

Students are expected to attend all classes. The official college attendance policy is followed. Attendance in each class is counted from the first day the student is eligible to attend the class as given on the student's assessment sheet registration card or student change notice. Student may obtain an excuse for the emergency absence from the dean of students upon presentation of satisfactory documentation.

## 13. Forms of teaching

- 1. Using of power point presentation and data show for head titles, introduction of subjects, definitions, figures, systematics position of invertebrates organisms.
- 2. Using white board
- 3. Classroom discussions about the lecture subjects and students questions
- 14. Assessment scheme
  - 1. The students are required to do two closed book exams during the academic year.
  - 2. Weekly quiz.
  - 3. Reports or seminars

15. Student learning outcome:

1. Students will learn to recognize and be able to classify the major (common,

economically or medically important, evolutionarily significant, or for other reasons) groups of animals.

- 2. Students will learn specialized terminology and basic concepts of zoology.
- 3. Students will learn evolutionary relationships among the different groups of animals.
- 4. Students will learn basic, selected external and internal structure and associated biology/function for different kinds of animals.
- 5. Students will learn quantitative measurement, statistical methodology, and hypothesis formulation and testing in zoology.
- 6. Students will learn to integrate all of the above.
- 7. Students will come to appreciate and enjoy the subject of zoology (i.e., have fun) and be able to place the subject in the larger context of human knowledge and experience on a global scale.

16. Course Reading List and References:

- 1. Cleveland P. et al, Integrated the Principles Of Zoology,11 Edition, 2001, McGraw-Hill Companies, Inc., New York.
- 2. Miller Harley, Zoology, 5 Edition, 2001, © The McGraw Hill Companies
- 3. Cleveland P. et al, Integrated the Principles Of Zoology, 14 Edition, 2008, McGraw-Hill Companies, Inc., 1221 Avenue of the Americas, New York
- 4. Campbell, N. A., et al. 1999. Biology. 5th edition. Benjamin/Cummings.
- 5. Lytle, C. F. 2000. General Zoology: Lab Guide. McGraw-Hill.

# 17. The Topics: Week& Subject

- 17. The Topics: by Week
  - 1. Animal classification, phylogeny and organization
  - 2. The protozoa
  - 3. Porifra (spong)
  - 4. Helmenthis

a. Platyhelminthes		
b. Nematodes		
c. Cestodes		
d. Annelida حلقيات		
5. Cnidaria اللاسعات		
6. Rotifera		
ر خويات 7. Mollusca		
Vertebrate		
8. Arthropods		
شوكيات الجلد Echinoderms		
and chordata كائنات بحريه بشكل ديدان and chordata		
11. The Fishes (I)		
12. The Fishes (II)		
13. Amphibians		
14. Reptiles		
15. Birds		
16. Mammals (I)		
17. Mammals (II)		
18. Mammals (III)		
18. Practical Topics (If there is any)		
In this section The lecturer shall write titles of all practical topics he/she is		
going to give during the term. This also includes a brief description of the objectives of each topic, date and time of the lecture		
19. Examinations:		
Q1- Choose the correct answer from the following sentences :		

- 1. One of the following is not true about Crustacean.
- a. Mainly marine
- b. Few terrestrial species.
- c. Free-living taxa
- d. Many freshwater
- Q2- Mark the following sentences as true or false:

1. In Chordata Notochord present at some stage in the life cycle Single, ventral, tubular nerve cord.

Q3- Explain by figure the Holometabolous (Complete) Metamorphosis in butterfly.