Department of environmental science

College of science

Salahaddin university

Subject: Practical Zoology

Course Book –First course

Lecturer's name: Halala Rahman Qader

Academic Year: 2023/2024

Course Book

1. Course name	**Practical Zoology**
2. Lecturer in charge	**Halala Rahman Qader**
3. Department/ College	**Health and environmental science dept./ College of sceince**
4. Contact	**E-mail:halala.qader@su.edu.krd**
5. Time (in hours) per week	**Practical: 4 hrs**
6. Office hours	
7. Course code	
8. Teacher's academic profile	In year (2007-2008) took BSc degree in biology, salahaddin university, college of education. In 2013 got master degree in Ecophysiology at the same university. I was starting teaching as assistant lecturer in environmental science department since 2014, now lecturer at the same department.
9. Keywords	**Animal, Cell , Tissue**

10. Course overview:

Zoology can be defined as the study of the simplest part of the body cells and tissues. The Cell: is the fundamental structural and functional unit of all living organisms. Cytology is a branch of biology, which deals with the study of cells in terms of structure, function and chemistry.

Classification of cells: There are two major types of cells: prokaryotic and eukaryotic.

The main difference between these two cell types is that Prokaryotic cells do not have a nuclear membrane. The nuclear material consists of a single chromosome and lies in the cytoplasm. The nuclear region is called nucleoid. Organelles are absent. Such as bacteria. Cells come in many different sizes. Some cells are visible to the naked eye (such as eggs of birds), however, most cells are microscopic and cannot be seen by the naked eye. Cells also come in many different shapes (e.g. spindle, aster, and oval, spherical, cylindrical) Animal cell

Animal cell is a typical eukaryotic cell. It is surrounded by a plasma membrane, which forms a selective barrier allowing nutrients to enter and waste products to leave. Unlike prokaryotic cells, DNA in animal cells is housed within the nucleus. In addition to having a nucleus, the cytoplasm contains specialized organelles, each of which is surrounded by a membrane. There is only one nucleus and it contains all the genetic information necessary for cell growth and reproduction. The other organelles occur in multiple copies and carry out the various functions of the cell, allowing it to survive and participate in the functioning of the larger organism.

11. Course objective:

The objectives of practical zoology are so clear, its all about the introducing of first class students with the for, structure and functions of all the cells and tissues in animal bodies constituents, with making their ability to distinguish between each type of cells and tissues. And all the necessity requirements of zoology lab will be introduced to them with details of their functions.

To understanding and Learning

1. Main safety rules of working in the bacteriology lab.
2. Types of tissue.
3. Methods of dissecting. And
4. Slide preparation, staining.

12. Student's obligation

The students should do their homework every week by preparing for quizzes and doing their lab. Procedures every week by themselves. Assessment of their homework or procedure will be the standard for their evaluation in labs. Bringing frogs by students and introduce them with the structure and habitat of frogs after that anatomy of frog will be studied.

13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course includes; power point presentations for the head titles and topics or by hand writing, giving illustration about the principles of zoology, besides worksheet will be designed to let the chance for practicing on several aspects of the course in the classroom. The classroom discussion is asset to give the lecture more vitality and also to reach enough background and information to the students.

To get the best of the course, it is suggested that you attend classes as much as possible, read the required lectures, teacher's notes and ready for weekly quiz. Try as much as possible to participate in classroom discussions, preparing the assignments given in the course.

14. Assessment scheme

Breakdown of overall assessment and examination

The students are required to do two or three practical exams (practical) at different periods of the semester. Final examination has 35 marks. So that the final grade will be based upon the following criteria:
Examinations: 30%
Daily Activity & quizzes : 5%

15. Student learning outcome:

Practical zoology is the basic science in biology, the basic unit of life are cells and tissues. Here the students should have knowledge about them with the huge differences between each of them. Zoology is about everything in environments that we living with, having knowledge with the particle units and the functions of them and how they work together to form a unique body with high bodily performance functions, zoology is about life of animals in surrounding area which may be exposed to every minute in life.

16. Course Reading List and References:

1. Miller, S. and Harley, J. (2001).Zoology.5th ed
2. MARTINI, F., TIMMONS, M.J., TALLITSCH, R.B., OBER, W.C., GARRISON, C.W., WELCH, K.B. and HUTCHINGS, R.T. (2018) **Human anatomy**, New York, *Pearson/Benjamin Cummings San Francisco, CA.*

4. The core materials of the course consists of the above book, articles from internet, and lecture's notes, make sure you read all the materials and prepare well before going for the examinations.

17. The Topics:	**Lecturer's name**
In this section the lecturer shall write titles of all 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 Each term should include not less than 16 weeks	Lecturer's name ex:(2 hrs)
17. Practical Topics (If there is any)	Lecturer's name:**Halala Rahman Qader**

1- Biology Laboratory Safety Rules and Recommendations	
2-Cell structure	
3-cell division mitosis	
4- cell division meosis	
5- Types of animal tissue	
6-classification of animals	
7-classification of living things	
8-preparation of blood smear and simple sqamata cell in the mouth	
9-invertebrate animals	

19. Examinations:

1. Compositional:

What is the composition of animal body?

2-Write the types of loose connective tissue and their location in body.

3-Identify this slide? Where is found? What is the main function?

4. How the cells and tissues work?

5. Write the class and order and scientific name of frog?

3. Multiple choices:

There are .... types of animal tissues? A- 4 B- 5 C-3 D-2

20. Extra notes:

21. Peer review