



**Department of Animal Resources**

**College of Agriculture Engineering Science**

**Salahaddin University -Erbil**

**Subject: *Zoology***

**Course Book – (*Year 1*)**

**Lecturer's name: *Dr. Lanja Assad Ismael &***

***Mrs. Naz Shwan Rasheed***

**Academic Year: *2022/2023***

## Course Book

1. Course name	zoology
2. Lecturer in charge	Dr. Lanja assad Ismael and Mrs <i>Naz Shwan Rasheed</i>
3. Department/ College	Animal Resource, Agricultural College
4. Contact	e-mail: lanja.ismael@su.edu.krd Tel: (optional):
5. Time (in hours) per week	Theory: 2 hrs Practical : 3 hrs
6. Office hours	6 hrs
7. Course code	
8. Teacher's academic profile	I'm finished my BS.c 1n 2000 in salahaddin University after that in 2001 started as a Repeater in Animal Resource Department at University of Salahaddin, I got my MS.c in avian physiology in 2006 and I'm a candidate of PhD in avian physiology at Salahaddin university.
9. Keywords	Cell , tissue , muscle ,
10. Course overview:	<p>This course very important and necessary materials for college students in general and in particular scientific agriculture college students because it cannot keep up with modern developments without knowledge of this aspect of modern science.</p> <p>In this course addressed some of the basics necessary to genetics to understand biotechnology and the biotechnology include genetic engineering and molecular genetics, in addition to tissue culture</p>
11. Course objective:	<p>The targets of this semester were:</p> <p>(1) How do we study animals?</p> <p>Zoology, like all areas of science, is shaped by the scientific method. The scientific method--a series of steps that scientists take in order to acquire, test, and characterize the natural world--is the process by which zoologists study animals.</p> <p>(2) How do we name and classify animals?</p> <p>Taxonomy, the study of the classification and nomenclature of living things, enables us to assign names to animals and to group them into meaningful categories. Living things are classified into a hierarchy of groups, the highest level being the kingdom, followed by the phylum, class, order, family, genus, and species. There are five kingdoms of living things: plants, animals, fungi, monera, and protista. Zoology, the</p>

**study of animals, focuses on those organisms in the animal kingdom.**

**(3) How do we organize the knowledge we acquire about animals?**

Zoological information can be organized into a hierarchy of topics that focus on different levels of organization: the molecular or cellular level, the individual organism level, the population level, the species level, the community level, the ecosystem level, and so forth. Each level aims to describe animal life from a different perspective.

**12. Student's obligation**

The students must be presences with this course in all lectures and examinations and it's necessary to made at less one report about this field of the sciences .

**13. Forms of teaching**

I'm using the data show, power point, white board, and video to learn more about this course.

You can read all my research papers on the researchgeat web site:  
Assist. Lanja assad ismael

**14. Assessment scheme**

- Written tests (1 × 15%) = 15%
- Quiz/attendance (5 × 2%) = 10%
- Written final examination (1 × 40%) = 40%
- = 65% total theory
  
- Written tests (1 x 10%) = 10%
- Quiz/attendance and Reports = 5%
- Written final examination (1 x 20%) = 20%
- = 35% total practical

**15. Student learning outcome:**

We have to study zoology to understand and preserve the vast diversity of species on our planet. Losing them would be a huge shame and almost a crime of humanity. We have caused and continue to cause most of the trouble that leads to species extinction. Just because we are the “dominant” species on Earth doesn’t mean that we can do whatever we want without suffering

consequences.

Not only do we have to protect endangered species, we also have to protect species essential to the continuation of Earth's life. Believe it or not, without animals, humans would die out pretty quickly. First of all, there would be no more meat. But we can't all become vegetarians either, because there are no insects to pollinate the plants. And what about decomposers? They would disappear as well.

And lastly, we must study zoology to learn about our own ancestry and how we came to be. From animals, we can also learn about our anatomy and better understand the function of our bodies, which can help us combat diseases.

In conclusion, zoology is an important field of science that applies to many real-world situations.

#### **16. Course Reading List and References:**

1. "Zoology". Dictionary.com.  
<http://dictionary.reference.com/search?q=zoology>. Retrieved 26 April 2007.
2. Albertus Magnus. On Animals: A Medieval Summa Zoologica. The Review of Metaphysics | December 01, 2001 | Tkacz, Michael W
3. Mehmet Bayrakdar (1983). "Al-Jahiz and the rise of biological evolution". The Islamic Quarterly 21: 149–55. Retrieved 21 December 2012.
4. Paul S. Agutter & Denys N. Wheatley (2008). Thinking about Life: The History and Philosophy of Biology and Other Sciences. Springer. p. 43. ISBN 1-4020-8865-5
5. Saint Albertus Magnus (1999). On Animals: A Medieval Summa Zoologica. Johns Hopkins University Press. ISBN 0-8018-4823-7.
6. Lois N. Magner (2002). A History of the Life Sciences, Revised and Expanded. CRC Press. pp. 133–144. ISBN 0-8247-0824-5.

7. Jan Sapp (2003). "Chapter 7". Genesis: The Evolution of Biology. Oxford University Press. ISBN 0-19-515619-6.

17. The Topics:	Lecturer's name
<p>1- Terminology</p> <p>2- Introduction about zoology</p> <p>3- The cell</p> <p>4- The protoplasm membrane</p> <p>5- The tissue</p> <p>6- Epithelial tissue</p> <p>7- First exam</p> <p>8- Connective tissue</p> <p>9- Nervous tissue</p> <p>10- Muscular tissue</p> <p>11- Specialized connective tissue</p> <p>12- Ecology</p> <p>13- Taxonomy</p> <p>14- Second exam.</p>	<p><i>Dr. Lanja Assad Ismael &amp; Mrs. Naz Shwan Rasheed</i></p> <p><b>Two hrs for each lecture.</b></p>
<p><b>Topics of practical parts:</b></p> <ul style="list-style-type: none"> <li>• The microscope</li> <li>• Cells : different types of cells and their properties(size, internal composition, and shape)</li> </ul>	<p>Mr. Samir Sartip Mrs. Noor Naji</p>

<ul style="list-style-type: none"> <li>• Tissues ( different types of tissues)</li> <li>• Properties of simple epithelial tissue</li> <li>• Stratified epithelial tissue</li> <li>• Glandular tissue</li> <li>• Connective tissue</li> <li>• Muscular tissue</li> <li>• ☐ Nervous tissue</li> </ul>	
<p><b>19. Examinations:</b></p> <p><u>Q1: Define the following terms:</u> ( 30 mark)</p> <p>Centrosome , Zoology , Fluidity , Animal Tissue , Taxonomy , Viscosity , Permeability , Receptors , Active Transport .</p> <p><u>Q2:complete the following spaces with correct world :</u> (40 mark)</p> <p>1- Some of the most important properties of protoplasm are _____ , _____ , _____ , _____ , _____ .</p> <p>2- Brownian movement is _____ .</p> <p>3-There are such models are proposed to explain the structure of plasma membrane _____ , _____ , _____ , _____ , _____ .</p> <p>4-The physical properties of protoplasm is _____ , _____ , _____ , _____ .</p>	<p><b>You must write or drawing the figure or curve when it necessary.</b></p>

<p>5-Protein are critical to cell membrane function because _____ , _____ , _____ , _____ , _____ .</p> <p><u>Q3</u> _____ :</p> <p>( 30 mark) Define animal epithelial tissue , and numerical its function , and write the classification of epithelium tissue.</p> <p>□</p>	
<p><b>21. Peer review</b></p>	<p>پیداچونہوہی ھاوہل</p>