

Ministry of Higher Education and Scientific research



Department of Biology

College of Science

Salahaddin university-Erbil

Subject: Zoology

Course Book – 1st Year

Lecturer's name (theory): Dr. Fairuz H. Abdullah

Lecturer's name (practical): Asst. Lecturer Kazhal

Academic Year: 2023-2024

Course Book

1. Course name	Zoology
2. Lecturers in charge	Dr. Fairuz H. Abdullah
3. Department/ College	Department of Biology /College of Science
4. Contact	e-mail: fairuz.abdullah@su.edu.krd
5. Time (in hours) per week	Theory: 2
6. Office hours	To be Return to the schedule on the office door
7. Course code	
8. Teacher's academic profile	<p>During the first semester of academic year (2022-2023), I taught Zoology (Theory), (First Course) for 1st stage students of Biology Department (Biomedical) and Molecular Biology (Second course) for 3rd stage students of the Biology Department (General).</p> <p>The academic year (2021-2022), I taught Human Biology (Theory), (First Course) for 2nd stage students of Medical Physics Department and Molecular Biology (First and Second course) for 3rd stage students of the Biology Department.</p> <p>I placed myself to Rizgary Teaching Hospital from (24.09.2020) to (24.09.2021). I became Lecturer on (13.01.2020). I have completed PhD. degree in Biotechnology on (05.12.2019).</p> <p>In 2015, I applied for studying PhD with IELTS band score 6.5 (Academic) and I was the only applicant with this score. I became PhD student in the speciality of Biotechnology with the rank 4th over the PhD applicants of my department. During the first</p>

semester of academic year 2016-2017, I took (Practical Biotechnology), I also taught soil microbiology second course of academic year (2016-2017) and I was teaching Practical Biotechnology during the first semester of this academic year (4th stage), and teaching practical Molecular Biology (3rd stage) the second semester along with being a PhD student. I also worked as a Member of the Examination Committee for College of Science/ Control in the academic year 2014-2015.

I graduated from Salahaddin University in 2009 (Ranked 2nd on collage/ 1st on Biology dept.). I worked as assistant biologist during 2009-2010. I worked in the labs of General Microbiology, Environmental Microbiology as well as Microtechniques. In 2013 I got my MSc. degree in Molecular Microbiology and started working as Assistant Lecturer. At first I was teaching Entomology for one year and a half, and then I took the subject of my speciality (Practical Molecular Techniques).

I graduate from Salahaddin University in 1992 (Ranked 5th in collage). In 1995 I finished my MSc degree and started as Assistant Lecturer Teaching Practical Parasitology, Practical Entomology, and Practical Invertebrate Biology
At 2013 I got Assistant prof. degree, from that time, I am in charge of teaching Entomology theory for 4th class students at Environmental Science Department, and teaching Entomology theory for 3rd class students in Biology department, Supervising Entomology Practical Laboratory, supervising graduate students.

9. Keywords	
10. Course objective: The purpose of taking this course is to learn the basic concepts and principles of biology and zoology.	
11. Student's obligation Attendance in lecture is expected. You are responsible for everything covered, mentioned, discussed and displayed in class. If you miss a class, get a classmate's notes as my notes will not be available. You cannot excel in this course if you do not come to class.	
12. Forms of teaching Coursebook, PowerPoint, board and video.	
13. Assessment scheme Assessment will be in the form of two in-class exams, a final exam, a series of unannounced quizzes and assignments. Each component is worth the following proportion towards your final grade: In-class quizzes: 3 Attendance: 2 Assignments: 3 Exam: 7	
Weeks	Lecture Topics
1 st week	Course book , introduction and essential terms
2 nd week	Chemistry of Life 1. Water and Life 2. Macromolecules
3 rd week	Cells as units of life 1. Cell concept 2. Organization of cells
4 th week	Cellular metabolism 1. The role of enzymes

	2. Enzyme regulation 3. Cellular respiration
	Exam
5 th week	Activity of Life 1-Support, Protection, and Movement
6 th week	2- Homeostasis: Osmotic Regulation, Excretion, and Temperature Regulation
7 th week	3- Homeostasis: Internal Fluids and Respiration
8 th week	4- Digestion and Nutrition
9 th week	5-Nervous Coordination: Nervous System and Sense Organs
	Exam
10 th week	6- Chemical Coordination: Endocrine System
11 th week	Immunity
12 th week	Animals and Their Environments
13 th week	Animal Distributions

Course Book

1. Course name	Practical Zoology
2. Lecturer in charge	Shna Ibrahim Ismail
3. Department/ College	Biology/ Science
4. Contact	e-mail: shna.ismail@su.edu.krd
5. Time (in hours) per week	2 hrs./week
6. Office hours	2 hrs./week
7. Course code	SBio 105
8. Teacher's academic profile	During 2004-2008 studied BSc in biology at college of science/university of Salahaddin and graduated by

<p>Shna Ibrahim Ismail</p>	<p>obtaining third rank among my class with average grade 81.9%.</p> <p>In March 2009 Joined academic staff as assistant biology in Salahaddin University /College of Science /Biology Department.</p> <p>In December 2012 applied for postgraduate study at the same department and got my MSc degree in medical mycology in august 2015.</p> <p>In July 2020 achieved my academic title as assistant lecturer and started teaching in my department till now.</p> <ul style="list-style-type: none"> • I participated in some courses including the followings: <ol style="list-style-type: none"> 1. Computer Training course in 2011 in the same university. 2. Teaching Methods Course in 2015 in the same university.
<p>9. Keywords</p>	<p>Microscope, Cell, Cell theory, Mitosis, Meiosis, Tissues, Invertebrates, Nomenclature, and Classification.</p>
<p>10. Course overview:</p> <ul style="list-style-type: none"> * History of Zoology Microscope structure and its uses. * The importance of studying the Zoology * How cells divide. Differences between mitosis and meiosis. * Tissues and it is types. * Epithelial tissues definition and types. * Connective tissue and it is types. * Muscular and nervous tissues. * Scientific classification of living organisms. * Kingdom Protista. * Kingdom Animalia and it is phyla including Porifera, Cnidaria, Platyhelminthes, Annelida, Mollusca, Echinodermata, Arthropoda, and chordata. * Frog dissection 	

11. Course objective:

- The course will cover Zoology, which is the science that deals the animal life. The "Zoology" is come from "the Greek word" Zoo = animal" and "Logos = science".
- In the Zoology laboratory, Students will see different specimens and slides to study how animals constructed and ask about their parts function.
- The course will give students a good understanding about a number of animal characteristic topics, as: Growth, Life cycles, Forms of animals, Ecosystems of animals, Morphological appearance, Evolutionary relationships, and Taxonomy of animals.

12. Student's obligation

- **Exam policy:** Student should take at least 2 exams during the course.
- **lab polices:**
 1. **Attendance:** You are strongly encouraged to attend class on a regular basis, as participation is important to your understanding of the material. You are responsible for obtaining any information you miss due to absence.
 2. **Lateness:** Lateness to class is disruptive.
 3. **Electronic devices:** All cell phones are to be turned off at the beginning of class and put away during the entire class.
 4. **Talking:** During class please refrain from side conversations. These can be disruptive to your fellow students and your professor
 5. **No Disrespectful to both the teacher and to your colleagues.**
 6. **Weekly Quizzes:** every lab you should take quiz
 7. **Lab coat:** you have to wear your lab coat to your protection.
 8. **Eating and drinking is prohibited inside the lab.**
 9. **You should monitor and records your practical works and results.**

13. Forms of teaching

- Course book
- Data show and power point.
- Scientific videos.
- Soft and hard copy lectures
- Papers for practical work and notes.
- Whiteboard.

14. Assessment scheme:

Exam 1	14 marks
Exam 2	14 marks
Quizzes and Weekly lab activates	4 marks
Lab copy book	3 mark
Total	35 marks

15. Student learning outcome:

- The importance of studying Zoology.
- Students will see different specimens and slides to study how animals constructed and ask about their parts function.
- a good understanding about a number of animal characteristic topics, as: Growth, Life cycles, Forms of animals, Ecosystems of animals, Morphological appearance, Evolutionary relationships, Taxonomy of animals.
- Dissecting of frog.
- Scientific classification of living organisms.
- A good knowledge about Kingdom Protista.
- A good knowledge about Kingdom Fungi.
- A good knowledge about Kingdom Animalia and its phyla including Porifera, Cnidaria, Platyhelminthes, Annelida, Mollusca, Echinodermata, Arthropoda, and chordate.

16. Course Reading List and References:

1. Fundamentals of Zoology, 2008, by Ghose K.C. and B. Manna, New Central Book Agency, Ltd. India.
2. Laboratory Studies in Integrated Principles of Zoology”, 1997, by C. P. Hickman; F. M. Hickman and L. Kats, 9th Edition, WCB McGraw - Hill companies, New York.
3. Animal Diversity, 2002, Cleveland P. Hickman, Jr., Larry S. Roberts, Allan Larson, 3rd edition, McGraw - Hill companies, New York. Soft-copy.
4. And any other zoology books published recently.

17. Practical Topics

∞ First Semester

Week 1:

Course outline and hints for student’s safety and academic success.

Week 2:

Introduction to Zoology, Microscope

Week 3:

Diversity of the Cells

Week 4:

Cell division, Mitosis

Week 5:

Meiosis

Week 6: 1st Exam.

Week 7:

Tissues: Epithelial Tissue

Week 8:

Connective Tissue

Week 9:

Special Connective Tissue

Week 10:

Muscle Tissue & Nervous Tissue

Week 11: 2nd Exam.

Second Semester

Week 1:

Classification, Kingdom: Protista

Week 2:

Kingdom: Animalia

Subkingdom: Parazoa

Phylum: Porifera

Week 3:

Subkingdom: Metazoa

Phylum: Cnidaria (Coelentrata)

Week 4:

Phylum: Platyhelminthes (Flatworm)

Phylum: Nematelminthes or Aschelminthes

Week 5:

Phylum: Annelida (Segmented worms or Vermes)

Week 6: 1st Exam.

Week 7:

Phylum: Arthropoda

Week 8:

Phylum: Mollusca (Soft)

Week 9:

Phylum: Echinodermata (Spiny Skin)

Week 10:

Phylum: Chordata, part-1

Week 11:

Phylum: Chordata, part-2

Week 12: 2nd Exam.

Week 13:

Frog Dissection

18. Examinations:

1. Compositional: In this type of exam the questions usually starts with Explain how, What are the reasons for...?, Why...?, How....?

2. sample identifying:

Example: identify this test (in the picture or direct)

3.fill the blanks:

Example: In prophase centrioles begin to separate, each forming around itself a system of microtubule called even longer microtubule called

20. Extra notes:

No notes

21. Peer review

Peer name: