INSTITUTE OF EDUCATION AND RESEARCH

University of the Punjab, Lahore

BS Science Education (1-8)

Course Outline

Programme	**BS Science Education (1-8)**	**Course Code**	**SE-307L**	**Credit Hours**	1
Course Title	**Zoology Lab-III: Chordate Diversity (Classification, Phylogeny and Organization)**				

Course Introduction

This course will provide hands on experience for learners. Students will get chance to interact

with Vertebrate members. Students will learn classification of each member of each phylum

with adaptions in relation to habitat of the specimen. Preserved Specimen or colored projection slide and or CD ROM projection of computer will be used.

Learning Outcomes

On the completion of the course, the students will:

1. Familiarized with the morphological and systematic knowledge about different principal representative classes of phylum in animals.
2. Learn about the general characters, structure, life history, classification and economic importance of different classes of phylum in animals

	Course Content	**Assignments/Readings**
Week 1	1. Study of a representative of hemichordate and invertebrate chordate.	Practical Copy Preparation
Week 2	1.1. Study of a representative of hemichordate and invertebrate chordate. (CONT.)	Practical Copy Preparation
Week 3	2. Study of representative groups of class fishes.	Practical Copy Preparation
Week 4	2.1. Study of representative groups of class fishes. (CONT.)	Practical Copy Preparation
Week 5	2.2. Study of representative groups of class fishes. (CONT.)	Practical Copy Preparation
Week 6	3. Study of representative groups of class Amphibia.	Practical Copy Preparation
Week 7	3.1. Study of representative groups of class Amphibia. (CONT.)	Practical Copy Preparation
Week 8	4. Study of representative groups of class Reptelia.	Practical Copy Preparation
Week 9	4.1. Study of representative groups of class Reptelia. (CONT.)	Practical Copy Preparation

Week 10	5. Study of representative groups of class Aves.	Practical Copy Preparation
Week 11	5.1. Study of representative groups of class Aves. (CONT.)	Practical Copy Preparation
Week 12	5.2. Study of representative groups of class Aves. (CONT.)	Practical Copy Preparation
Week 13	6. Study of representative groups of class Mammalia.	Practical Copy Preparation
Week 14	6.1. Study of representative groups of class Mammalia. (CONT.)	Practical Copy Preparation
Week 15	7. Field trips to study animal diversity in an ecosysem.	Practical Copy Preparation
Week 16	7.1. Field trips to study animal diversity in an ecosysem. (CONT.)	Practical Copy Preparation

Textbooks and Reading Material

Hickman, C. P. & Kats, H. L. (2000). Laboratory studies in integrated principles of zoology. Singapore: McGraw Hill.

Miller, S. A. (2002). General zoology laboratory manual (5th ed) (International). Singapore: McGraw Hill.

Teaching Learning Strategies

1. Discussion
2. Demonstration Method
3. Lecture Method
4. Project Method

Assignments

1. Class presentation
2. written assignment

Assessment

Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.