Institute of Zoology,
Faculty of Life Sciences
University of the Punjab, Lahore
Course Outline

Programme	BS Zoology	**Course Code**	**ZOOL-302**	**Credit Hours**	1
Course Title	**Lab. Entomology**				

Course Introduction

This course provides a comprehensive exploration of insect structure and function. Which include study of anatomical and physiological features of the insects for clear understanding of entomology. It includes study of general characters of insects, coloration, metamorphosis, mouthparts, comparative structures of all systems and reproduction

Learning Outcomes

On the completion of the course the student will be able to:
1. Learn the basic and advanced anatomical features of insects including external and internal structures.
2. Explore physiological processes such as digestion, respiration, circulation, excretion and reproduction
3. Understand the ecological roles of insects, including their interactions with other organism and their impact on ecosystem.
4. Investigate the adaptations of insects to exploit diverse environments

Course Content		**Assignments/Readings**
Week 1	Preparation of permanent slides	
Week 2	Preparation of slides of mouthparts of cockroach	
Week 3	Study of mouthparts of Honeybee	
Week 4	Dissection of cockroach digestive system	
Week 5	Study of insect wings	
Week 6	Study of wings, antennae of various insects	
Week 7	Study of antennae of mosquito	
Week 8	Study of sympathetic nervous system of cockroach	
Week 9	Study of different representative members of major orders of insects	
Week 10	Insect collection techniques	
Week 11	Field visits for collection of insects belonging to different orders	
Week 12	Insect Pinning and display learning	
Week 13	Ecological notes on insects of economic importance	
Week 14	Field tour for insect collection	
Week 15	Field visit for crops pest study	
Week 16	Study of different wing cover of insects	

Textbooks and Reading Material

Textbook
1. General Text Book of Entomology. Imm. Richards and Davies, Vol.1 and Vol II
Additional Readings

2. The Insects: Structure and Function, 2000. Chapman.
3. Insect Physiology. Wiggles Worth.
4. Insect Physiology. Pattons.
5. Insect Ecology. Price.
6. Ecology: The Experimental Analysist Abundance. Krebs.
7. Modern Entomology, 1997. Tembhare.
8. Ecological Methods, 1978. T.R.E. Southhood.
9. Elements of Insect Ecology, 1997. S.S. Yasbani and M.L. Agarwal.
10. Entomology and Pest Management, 6th Edition, by Pedigo, L.P. and Marlin

Teaching Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos/films will be shown on occasion.

Assignments: Types and Number with Calendar

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

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. class Attendence
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.