

K. T. S. P. Mandal's
Sahebraoji Buttepatil Mahavidyalaya, Rajgurunagar.

Department of Zoology

Teaching Plan (A.Y.2025-2026)

S.Y. B. Sc. Zoology

Semester: IV



Course Title: ZOO - 291 - MN Modern Zoological Techniques and Instrumentation - II

Sr. No	Month	Topics	Teacher
1.	Dec 2025	1. Basics of Molecular Tools in Zoology : 1.1 DNA / RNA role in animal traits and identification. 1.2 Basics of DNA extraction and PCR. 1.3 Use of DNA barcoding in animal taxonomy.	PPS
2.	Jan 2026	2. Blood Analyzer and Animal Physiology Tools : 2.1 Hematology analyzers, Hemoglobin meter, Glucometer, Blood gas analyzer (portable), Hematocrit centrifuge, Manual blood cell counter. 2.2 Animal physiology tools: Electrocardiography (ECG), Electromyography (EMG), Blood pressure monitors, Respiratory gas Analyzers.	PPS
3.	Feb 2026	3. Diagnostic Kits and Rapid Testing in Animals: 3.1 ELISA principle - as used in poultry, vet diagnostics. 3.2 Pregnancy tests in animals and glucose strip tests. 3.3 Application of lateral flow assays in animal health. 3.4 Bleeding & clotting time, and their importance.	PPS
4.	Feb & March 2026	4. Environmental Monitoring for Zoology Field Work : 4.1 Use of DO & pH meters in fishery / ponds. 4.2 Simple noise / temperature data collection. 4.3 Importance in habitat study and animal welfare.	PPS
5.	March 2026	5. Wildlife Tracking and Field Techniques : 5.1 Camera traps, scat analysis, call recording. 5.2 Use of GPS and mobile apps for biodiversity mapping. 5.3 Application of citizen science and eBird / iNaturalist.	PPS

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