Hindi Vidya Prachar Samiti's

Ramniranjan Jhunjhunwala College

of Arts, Science & Commerce

(Empowered Autonomous College)

Affiliated to

UNIVERSITY OF MUMBAI

Syllabus for the T. Y. B.Sc. (under NEP)

Program: B.Sc. ZOOLOGY

Program Code: RJSUZOO

Vertical under NEP: Field Project

Course Code: RJFPZOO351

(Implemented in 2025-2026 in alignment with the NEP 2020 facilitating the inter-and multidisciplinary learning and multiple entry and exit of the students)
Level 5.5

(CBCS 2024-2025)

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

PREAMBLE

The National Education Policy 2020 aims at imparting skill-based learning and caters to the multiple entry and exit facility for the students thus empowering them to acquire knowledge at their pace. In the three-year UG program, the student has two exit options. Students also have the option of choosing the Honors program of four years study in a given discipline and later converting it to five-year integrated PG degree program.

As an undergraduate student, he/she learns the core subject (Major), subject complementing the core subject (Minor), a course from other discipline; open elective course (OEC or GEC) and Vocational and Skill Enhancement course from the Major (VSEC). The remaining verticals under NEP 2020 are IKS (Indian Knowledge System), AEC (Ability Enhancement Course), VEC (Value Enhancement Course) and with progressive three years of UG, student also completes at different levels OJT (On Job Training), FP (Field Projects), CEP (Community Engagement Program), RP (Research Project) which helps him/her in understanding their roots, application of the knowledge for the benefit of self and the society. Vertical CC (Co-curricular activities and activities related to yoga and human well-being) helps in preparing youth with good character and interpersonal relationships. The subject of Zoology offers the basic understanding about the vast diversity of the animal kingdom across the globe. It enables the students to strengthen their knowledge in Animal Sciences and in the other allied branches of Zoology. Keeping the interest of learner in mind, the syllabus has been carefully designed. It has a balance of the classical aspects of Zoology which includes topics like taxonomy, ecology, ethology, developmental biology, physiology, fishery science, animal husbandry and economic entomology. The syllabus also includes applied subjects like biochemistry, pathology, immunology, molecular biology and epidemiology. The undergraduate curriculum has been meticulously designed by considering the need for the subject development, industry requirement, research outlook, competitive exams and entrepreneurship skills. Each unit included in the syllabus has clearly defined objectives. It focuses on outcome-based learning. It aims at inculcating the critical thinking, enhancing the analytical ability, developing writing skills of the students. The syllabus includes field trips to ecological habitats, agrofarms, national parks, sanctuaries, natural history museum, reputed research institutes and industries to widen the student's horizon. The students are encouraged to participate in various project-based activities. Owing to the current needs of the industry and other sectors, the syllabi is designed in a manner that the learner will be able to apply the knowledge and skills acquired in varied fields. The course encourages a sense of responsibility and empathy towards all living beings, promoting sustainable practices in the learner.

PROGRAMME OUTCOMES (PO) OF UNDERGRADUATE DEGREE PROGRAMMES

Program outcome refers to the overall characteristic an individual is supposed to acquire on completion of the three-year degree program in Bachelor of Science. The attributes based on acquisition, accumulation, and processing of knowledge of the subject are transferable beyond the discipline and useful in different domains of life.

Critical Thinking: Concepts, methodology and ability to formulate questions stimulate the inquisitiveness and critical thinking amongst the students.

Scientific Temperament: The nurturing of the young minds to observe and analyse the experiments in the laboratory or a phenomenon occurring around them to obtain a logical scientific explanation for it.

Analytical Thinking: The ability to think analytically can be developed by training and practice. The syllabus offers the student to understand the concept and design projects or experiments based on them.

Domain knowledge: The domain knowledge is the key to the understanding of advances and complex subject matter.

Social Ethics: The students are exposed to different problems caused due to human activity. They learn to conduct themselves without creating a damage to fellow beings.

Animal Ethics: The sensitization towards ethical issues associated with use of animals in the laboratory is highlighted and the solutions to overcome it are introduced.

Problem Solving: The ability to handle a situation is enhanced in the students by problem solving assignments, case studies, projects to make them competent, conscious and creative individual.

Environmental Sustainability: Environment related issues are addressed through workshops, Guest lectures and field studies.

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

PROGRAMME SPECIFIC OUTCOMES (PSOS)-BSc PROGRAMME IN ZOOLOGY

PSO1	Understands the nature and basic concepts of systematic classification, ecology, biomolecules, animal biotechnology, cell biology, and genetics.
PSO2	Analyse and comprehend the concepts of developmental biology, genetics and molecular biology. Acquaint with the skills in fishery biology, animal husbandry and economic entomology to boost entrepreneurship skills.
PSO3	Acquire skills and necessary training for techniques in haematology, immunology, physiology, endocrinology, enzymology, molecular biology, toxicology, cancer biology and field biology. Enhance knowledge on biostatistics, alternate energy, Wild-life tourism. Wildlife conservation and epidemiology to provide wider job prospects in the realm of Zoology.
PSO4	Perform laboratory procedures as per standard protocols in the areas of animal diversity, genetics, biochemistry, molecular biology, physiology, immunology, developmental biology, environmental Science and Pollution
PSO5	Apply ethical principles and knowledge in understanding of Zoology to one's own life and work. Applications of biological sciences in different areas that contributes towards nation building.

Hindi Vidya Prachar Samiti's Ramniranjan Jhunjhunwala College of Arts, Science & Commerce

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

.

SEMESTER	:	V
TITLE OF THE SUBJECT/COURSE	:	FIELD PROJECT
COURSE CODE	:	**RJFPZOO351**
CREDITS	:	02
DURATION	:	---

LEARNING OBJECTIVES
1. Understand the local diversity of different animals, habitats and physico-chemical parameters.
2. Understand issues related to commercial exploitation of animal life, habitats and its impact.
3. Learn organizational skills, team work, resilience

COURSE OUTCOME NUMBER	On completing the course, the student will be able to:	PSO Addressed	BLOOMS LEVEL
CO1	Identify types of insects, fishes etc, understand the local habitat and ecosystem, apply their classroom learnings to field studies	1,5	BT Level I, II, IV remember, apply, draw conclusions
CO2	Corelate issues like habitat loss, socio-economic changes, impact of urbanization with animal diversity.	1, 5	BT level II and III Understand and apply
CO3	Organize field trip, work in diverse teams, data compilation, writing skills,	1,5	BT Level I, II, IV remember, apply, draw conclusions

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

Field Project (FP)

Undergraduate level

Course Code: RJFPZOO351

CREDITS : 02 **MARKS 50**

Name and Signature of the Faculty (Mentor): _____

Dept. _____Course Code_____Date_____

UID No_____Roll No_____

Marks_____/50

Name of the student: _____

Title of Field project: _____

_____

Process of Field project assignment:

- ✓ Either Individual or Groups comprising of 3-4 students shall be made with one teacher mentor per group.
- ✓ The field project/visit shall be carried out under the guidance of the teacher mentor.
- ✓ After the field project/visit there would be a discussion on the project followed by report writing.
- ✓ The report of field project shall carry clear objectives, methodology, outcomes and significance of the study.

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

FIELD PROJECT ASSESSMENT GRID

Place one tick in each appropriate row. Overall mark should reflect the positions of ticks in the individual rows. In boxes that have more than one set of marks, cancel out the marks that are not applicable and circle the correct marks.

Project work and report (Parameters)	**Marks (50)**	**80 – 100% Excellent**	**60 -79% Good**	**40 – 59% Satisfactory**	**20 – 39% Average**
Experiment/ field work/ survey done	**20**	**20 / 19**	**18 / 17**	**16 / 15**	**14 /13**
Report writing and Statistical analysis & Bibliography	**10+5**	**15 / 14**	**13 / 12**	**11 / 10**	**09 /08**
Project Viva & Outcomes	**5+5**	**10 / 9**	**8 / 7**	**6 / 5**	**4 /3**
Active Participation & overall attendance	**05**	**5/4.5**	**4/3.5**	**3/2.5**	**2/1.5**

T.Y.B.Sc Zoology Field Project Assessment Grid Semester V

Mapping of the course to Local/ Regional/National/International relevance

Class	Course Name	Course Code	Local relevance	Regional relevance	National relevance	International relevance
T Y B Sc Zoology (Major)	Field Project	RJFPZOO351	Understanding local diversity of animals	Information on impact of geographical factors on animal distribution,	Co-relation with changing climate, habitat loss	Understanding socio-economics and impact of global climate change

Mapping of the course to Employability/ Entrepreneurship/Skill development

Class	Course Name	Course Code	Topic focusing on Employability/ Entrepreneurship/skill development	Employability/Entrepreneurship/Skill development	Specific activity
T Y B Sc Zoology (Major)	Field Project	RJFPZOO351	Entire course	Work as field guide, scientific writer, editor of articles.	Report writing and analysis

Integration of Cross cutting Issues

Class	Course Code	Cross Cutting Issues
T Y B Sc Zoology (Major)	RJFPZOO351	Socio-economic imbalance, climate change SDG goals 8, 11, 13, 14