## About the Department of Zoology

"It is not the strongest of the species that survives, not the most intelligent that survives.

It is the one that is the most adaptable to change." – Sir Charles Darwin

(Quote from the book, On the Origin of Species, 1859, by Sir Charles Darwin - Naturalist, Biologist, Geologist)

We may not know this full quotation, but we might be familiar with the shorter phrase, "survival of the fittest". This quotation refers to the fact that it isn't necessarily the smartest or the strongest species that will survive. If a species cannot adapt to change, it will not survive because change is a fact of life and evolution refers to being able to respond to change by adapting to it. The department of Zoology believes and practices in letter and spirit the essence behind this famous quote. This department was established in the year 1960, and its foundations were laid by committed, sincere, dedicated teaching and support staff; to name few of the former teachers such as, Prof. Donde, Prof. Prabhu, Prof. Ravi Verma, Dr. Usha Pradhan, Dr. Vinaya Pai, Prof. Vijay Shankar, and Dr. Smita Durve.

Since just like the world around us, the process of teaching science is changing rapidly, therefore, to ensure that the contents in the subject of zoology remain relevant in this era, we believe that the current undergraduates need to understand the process of science, the working knowledge of scientific process, the interdisciplinary nature of the new biology, and how science is closely integrated within society. It also attempts to encourage critical thinking and instill a spirit of scientific inquiry amongst students, besides making them competent in communication and collaboration.

The department keeps updated with recent advances in tools and techniques, which will give it a cutting edge, since it is aware, that in future, teaching will be evidence based, and goals for student learning will be skills based and learner centered rather than just content centered. We also want to ensure that any student completing a course in zoology, should graduate knowing zoology as a dynamic field of study, appreciate the diversity of animal kingdom, understand the contemporary threats to this diversity, and be inspired to help search for solutions to our environmental problems.

Under the aegis of academic autonomy, we have the freedom to restructure, redesign and refine our curriculum. However, we are also aware of the fact that 'academic freedom' comes with 'academic responsibility' especially in the pursuit of 'academic excellence'. Academic freedom has brought a paradigm shift in terms of measure of academic autonomy from the indices of 'teacher' to a measure of the 'learners' own perceptions of autonomy. It empowers 'learners' by giving them a say in course decisions, and therefore, accentuates 'choice' instead of 'compliance'.

The department encourages innovative teaching, learning and evaluation techniques, and gives emphasis on Bloom's Taxonomy so that learning outcomes compliments the learning objectives. It believes in continuous assessment of students performance justifying Outcome Based Evaluation. The evaluation strategies used are relevant and linked to curriculum such as seminar presentations, role play/skit, review of research paper/articles, review of book, report of field visits or study tours and research projects. This kind of an approach facilitates student-teacher interaction and justifies the relationship between 'autonomy', 'motivation' and 'performance'. Moreover, we also encourage an honest dialogue between the students as 'mentee' and teachers as 'mentors', and have always believed that 'students' are the most important stake holders in higher education.

The department has committed teachers to help foster the independence of students in academics and in the process attempt to shape students future for a meaningful life. Besides, teaching-learning and evaluation, teachers are also involved in various committees of the institution viz., Administration, Examination, IQAC, Sports, Nature Club – ISR activity, etc. Teachers and students collaborate in teamwork in organizing college events (viz., Xzooberance / Utkarsha – departmental literary fest, National Science Day celebration, Study tours/excursions, Field visits etc.).

We want to create a conducive environment for learners to sustain enthusiasm about the subject, which will encourage and maximize learning, to develop open, inquiring minds for holistic development. Hopefully, through these pursuits, we will find common ground to move forward and usher this department and our institution to reach greater heights.

Thus, may the kingdom of animals inspire the monarchy of the human mind!

## Programmes/Courses offered and resources/facilities in the department are as follows:

Undergraduate	B.Sc – Zoology as Major; Zoology as Minor with subjects/courses such as Botany,
Programme	Biochemistry, Chemistry, Microbiology, Physics
	Applied Component/Department Specific Elective – Fishery Biology
Vocational Skill	Instrumentation; Composting
Course	
Skill Enhancement	Animal Systematics
Course	
<b>Open Elective</b>	Insights into field biology
Value Added Course/	Aqua scaping
Certificate Course	
Postgraduate	M.Sc by Papers – Zoology with two specializations:
Programme	1) Animal Physiology
	2) Oceanography & Fishery Science
Recognized Research	M.Sc by Research and Ph.D – Zoology
Centre	
Facilities in the	ICT- enabled laboratories with LCD, Computers, Internet facility, equipment's and
Department	instruments, such as simple and compound microscopes, binocular microscope,
	colorimeters, spectrophotometer, pH meters, conductivity meter, microtome,
	cyclomixers, horizontal and vertical electrophoretic units, haemocytometers,
	haemoglobinometers, analytical balance, laminar flow, animal tissue culture unit,
	deep freezers, glassware's, consumables etc.
Teaching-Learning	Department Library- open access to books, e-books, educational charts, models etc.
Resources	
Museum specimens	Exhaustive collection of preserved animal specimens (Taxonomy/ Systematics)
Permanent slides	Sections of tissues/organs (Histology/Endocrinology), blood smears (Haematology /
	Immunology), whole mounts of organisms, plankton, mouth parts of insects, etc.



Dr. Satish Sarfare Vice Principal

Head, Department of Zoology Email: <a href="mailto:satishs@sies.edu.in">satishs@sies.edu.in</a>