

# DEPARTMENT OF ZOOLOGY

## A. PROGRAMME OUTCOME (PO)

- Evaluate the role of science, mathematics, and technology in addressing current issues facing local and global communities.
- Drives scientific and societal advancement through technological innovation and entrepreneurship.
- Acquire domain knowledge
- Strengthen critical thinking and reasoning skills
- Develop effective communication skills
- Imbibe human values, inclusiveness attitude and socio-cultural sensitivity
- Build up self-esteem and competence to face challenges
- Attain life-readiness through problem-solving skills and competencies
- Work effectively in groups to meet a shared goal with people whose disciplinary and cultural backgrounds differ from their own.
- Develop appropriate methods of research, investigation, and design, to solve problems in science, mathematics, and technology.

## B. PROGRAMME SPECIFIC OUTCOME (PSO)

- Acquire basic knowledge of various disciplines of Zoology and General Biology meant both for a graduate terminal course and for higher studies.
- Understand the rich diversity of organisms and their ecological and evolutionary significance.
- Acquire basic knowledge and skills in certain applied branches for self-employment.
- Impart awareness of the conservation of the biosphere.
- Imbibe basic skills in the observation and study of nature, biological techniques, experimental skills and scientific investigation.
- Create awareness on the internal harmony of different body systems and the need for maintaining good health through appropriate lifestyle.

## C. COURSE OUTCOMES (CO)

Semester	Course Code	Title of the Course	Course Outcome
I Core Course 1	ZY1CRT01	Core - General perspectives in Science & Protistan Diversity	<ol style="list-style-type: none"><li>1. To create an awareness on the basic philosophy of science, concepts and scope.</li><li>2. To understand different levels of biological diversity through the systematic classification</li><li>3. To generate interest in Protistan diversity</li><li>4. To impart knowledge on parasitic and pathogenic protists.</li></ol>

II Core Course 2	ZY2CRT02	Core - Animal Diversity-Non Chordata	<ol style="list-style-type: none"> <li>1. To create appreciation on diversity of life on earth and instill curiosity on invertebrates around us.</li> <li>2. To familiarize taxa level identification of animals.</li> <li>3. To understand the evolutionary significance of invertebrate fauna.</li> <li>4. To impart knowledge on parasitic forms of lower invertebrates.</li> </ol>
III Core Course 3	ZY3CRT03	Core - Animal Diversity-Chordata	<ol style="list-style-type: none"> <li>1. To acquire in depth knowledge on the diversity of chordates and their systematic position.</li> <li>2. To make them aware of the economic importance of some classes.</li> <li>3. To understand the evolutionary importance of selected chordate groups.</li> <li>4. To familiarize students about the existence of wide variety of mammals and how they are adapted to their habitat.</li> </ol>
IV Core Course 4	ZY4CRT04	Core- Research Methodology, Biophysics & Biostatistics	<ol style="list-style-type: none"> <li>1. To familiarise the learner the basics of instrumentation in biology.</li> <li>2. To develop skill in research communication and scientific documentation.</li> <li>3. To equip the students with the basic techniques of animal rearing collection and Preservation.</li> <li>4. To help the student to apply statistical methods in biological studies.</li> </ol>
V Core Course 5	ZY5CRT05	Environmental Biology & Human rights (T)	<ol style="list-style-type: none"> <li>1. To instill the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment and Society.</li> <li>2. To make the students aware of natural resources, their protection, conservation, the factors polluting the environment, their impacts and control measures.</li> <li>3. To teach the basic concepts of toxicology, their impact on human health and remedial measures</li> <li>4. To create a consciousness regarding Biodiversity, environmental issues &amp; conservation strategies .</li> </ol>
V	ZY5CRT06	Cell Biology & Genetics(T)	<ol style="list-style-type: none"> <li>1. Understand the structure and</li> </ol>

Core Course 6			<p>function of the cell as the fundamentals for understanding the functioning of all living organisms.</p> <ol style="list-style-type: none"> <li>To make aware of different cell organelles, their structure and role in living organisms.</li> <li>Develop critical thinking, skill and research aptitudes in basic and applied biology</li> <li>To emphasize the central role of genes and their inheritance in the life of all organisms.</li> </ol>
V Core Course 7	ZY5CRT07	Evolution, Ethology & Zoogeography(T)	<ol style="list-style-type: none"> <li>To acquire knowledge about the evolutionary history of earth - living and nonliving</li> <li>To acquire basic understanding about evolutionary concepts and theories.</li> <li>To study the distribution of animals on earth, its pattern, evolution and causative factors.</li> <li>To impart basic knowledge on animal behavioural patterns and their role.</li> </ol>
V Core Course 8	ZY5CRT08	Human Physiology, Biochemistry & Endocrinology	<ol style="list-style-type: none"> <li>Provide students with a deep knowledge in biochemistry, physiology and endocrinology of man.</li> <li>Impart basic understanding of the experimental methods and designs that can be used for further study and research.</li> <li>To acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.</li> <li>To appreciate the co ordination of various physiological and biochemical activities carried out in human body.</li> </ol>
	ZY5OPT01	OPEN COURSE - Vocational Zoology (Apiculture, Vermiculture, Ornamental fish culture)	<ol style="list-style-type: none"> <li>Introduce students to some of the present and future applications of bio-sciences.</li> <li>To acquire basic knowledge and skills in aquarium management, Quail farming, vermicomposting and apiculture for self-employment</li> </ol>

			<ol style="list-style-type: none"> <li>3. . To learn the different resources available and to develop an attitude towards sustainability.</li> <li>4. . Give awareness to society about need for waste management and organic farming.</li> </ol>
VI Core Course 9	ZY6CRT09	Developmental Biology(T)	<ol style="list-style-type: none"> <li>1. Achieve a basic understanding of the experimental methods and designs that can be used for future studies and research.</li> <li>2. To provide the students with the periodic class discussions of current events in science which will benefit them in their future studies in the biological/physiological sciences and health-related fields.</li> <li>3. To contribute to critical societal goal of a scientifically literate citizenry.</li> <li>4. An understanding of embryogenesis of man.</li> </ol>
VI Core Course 10	ZY6CRT10	Microbiology & Immunology(T)	<ol style="list-style-type: none"> <li>1. Make students aware of the pathogens, health related problems, their origin and treatment.</li> <li>2. Equip students to disseminate knowledge of epidemiology to public.</li> <li>3. Instil an interest in students to pursue higher studies and research in this field which has great prospects.</li> <li>4. Equip students with the knowledge of modern developments and recent trends in biological sciences.</li> </ol>
VI Core Course 11	ZY6CRT11	Biotechnology, Bioinformatics and Molecular Biology(T)	<ol style="list-style-type: none"> <li>1. To emphasize the central role of Biotechnology and Molecular biology, being the most developing areas of biological science.</li> <li>2. To develop critical thinking, skill and research aptitudes.</li> <li>3. Update and expand basic informatics skills and attitudes relevant to the emerging knowledge of society.</li> <li>4. Equip students to effectively utilize the digital knowledge resources in learning.</li> </ol>
VI Core Course 12	ZY6CRT12	Occupational Zoology (Aquaculture, Apiculture, Vermiculture & Quail farming)(T)	<ol style="list-style-type: none"> <li>1. To equip the students with self employment capabilities.</li> <li>2. To provide scientific knowledge of profitable farming.</li> </ol>

			<ol style="list-style-type: none"> <li>3. To acquire basic knowledge and skills in aquarium management, Quail farming, vermicomposting and apiculture for self-employment</li> <li>4. To introduce the student to some of the present and future applications of bio-sciences .</li> </ol>
	ZY6CBT04	Nutrition, Health & life style management(ELECTIVE)	<ol style="list-style-type: none"> <li>1. Provide students with a general concept of health and the parameters that define health and wellness.</li> <li>2. To understand principles of nutrition and its role in health.</li> <li>3. Familiarize the students regarding food safety, food laws &amp; regulations.</li> <li>4. Promote an understanding of the value of good life style practices, physical fitness and healthy food habits for life style disease management.</li> </ol>
	ZY6CRPRP	Project Work	<ol style="list-style-type: none"> <li>1. Develop an inclination towards research and research aptitude</li> <li>2. Equip students with the knowhow of how to do a research project.</li> <li>3. Impart writing skill and presentation skill.</li> <li>4. Creative thinking and self confidence.</li> </ol>
I Complementary Course 1	ZY1CMT01	Non-Chordate Diversity	<ol style="list-style-type: none"> <li>1. Understand the unity of life with rich diversity of organisms &amp; evolutionary significance of certain invertebrate fauna.</li> <li>2. Stimulate the curiosity of students about the biota living around them.</li> <li>3. Appreciate nature's harmony in diversity.</li> <li>4. Knowledge of non-chordate diversity on earth</li> </ol>
II Complementary Course 2	ZY2CMT02	Chordate Diversity	<ol style="list-style-type: none"> <li>1. Enhance curiosity to observe the diversity in chordates.</li> <li>2. To make the student ware of the economic importance of some chordates.</li> <li>3. Learn the physiological and anatomical peculiarities of some vertebrate species through type study.</li> <li>4. Stimulate the students' curiosity in vertebrates living associated with them.</li> </ol>

<p style="text-align: center;">III Complementary Course 3</p>	<p style="text-align: center;">ZY3CMT03</p>	<p style="text-align: center;">Physiology &amp; Immunology</p>	<ol style="list-style-type: none"> <li>1. Appreciate the correlation between structure and function of organisms.</li> <li>2. make students aware of the health related problems, their origin and treatment.</li> <li>3. Understand how efficiently our immune system works in our body.</li> <li>4. To acquire knowledge about preventing common diseases rather than curing.</li> </ol>
<p style="text-align: center;">IV Complementary Course 4</p>	<p style="text-align: center;">ZY4CMT04</p>	<p style="text-align: center;">Applied Zoology</p>	<ol style="list-style-type: none"> <li>1. To acquire basic knowledge and skills in applied branches of zoology.</li> <li>2. Understand the technology for utilising ecofriendly organisms around them for beneficial purpose.</li> <li>3. To equip the students for self employment opportunities with scientific knowledge to perform profitably &amp; confidently.</li> <li>4. To equip students become self sufficient.</li> </ol>