



**OFFICE OF THE PRINCIPAL, S.K.C.G. (AUTONOMOUS) COLLEGE,  
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**PROGRAMME OUTCOME**

**Department of ZOOLOGY**

<b>Objectives</b>	<b>Programme Outcome</b>
To enable students gain requisite knowledge and acquire ability to apply them as and when required	On graduation, the student will have the following abilities: a) A fundamental as well as a higher level of understanding, comprehension, analysis and articulation of concepts studied. b) Will have the ability to identify problems/issues and come up with creative solutions.

**SEMESTER - I**

<b>COURSE OUTCOME</b>		<b>Papers</b>	<b>Learning Outcome &amp; ATTAINMENT Level</b>
<b>CO 1</b>	Describe and define the life cycle features and peculiarities among non-coelomate non-chordates	Core Course Paper I & II GE 1A	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA-Continuous Internal Assessments) & ESE (End Semester Examinations)
<b>CO 2</b>	The study of general characteristics and classification of non-chordate phyla ranging from Protista through pseudocoelomates.		
<b>CO 3</b>	Study and acquire knowledge in applied Ecology and develop comprehensive ideas on food chain, ecological pyramids, biogeochemical cycle, physical factors, population and community.		
<b>CO 4</b>	Various biometry formulas such as mean, standard deviation, chi-square test, and students t-test help pupils develop basic data analytical power.		
<b>CO 5</b>	To assess-evaluate and summarize the complex topics/issues concerning these lower phyla of animal kingdom.		
<b>CO 6</b>	A student should be able to articulate, express verbally or demonstrate/write comprehensively on any of the topics covered.		

## SEMESTER - II

COURSE OUTCOME		Papers	LO & ATTAINMENT Level
<b>CO 1</b>	Describe and define the life cycle features and peculiarities among coelomate non-chordates	Core Course Paper III & IV GE -2A	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA-Continuous Internal Assessments) & ESE (End Semester Examinations)
<b>CO 2</b>	Non-chordate phyla from Annelida to Echinodermata are studied for their general characteristics and categorization. .		
<b>CO 3</b>	Identify specific, type genus and species of Viruses, viroid, mycoplasma, prions and various model of plasma membrane structure with different types of transport and junctions in Prokaryotic-Eukaryotic cells.		
<b>CO 4</b>	Learn about the structure and functions of different cell organelles with its cellular aspects of a phenomenon, process or structure of cells.		
<b>CO 5</b>	Ability to Summarize all the biological concepts illustrated through the topics studied and self-assess the understanding levels		
<b>CO 6</b>	Develop writing skills on the above themes by discussing or writing in the form of brief and/or extensive, topic-specific notes.		

**SEMESTER - III**

<b>COURSE OUTCOME</b>		<b>PAPERS</b>	<b>LO &amp; ATTAINMENT Level</b>
<b>CO 1</b>	Define and elaborate description about the diversity and distribution of chordates according to their geographical realms.	Core Course Paper V,VI & VII GE -3A	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA- Continuous Internal Assessments) & ESE (End Semester Examinations)
<b>CO 2</b>	Study of the characteristics and classification with different features and connective link among chordates.		
<b>CO 3</b>	Comprehend the different physiological processes in controlling and coordination systems of animals.		
<b>CO 4</b>	Have fundamental knowledge of biochemistry of different biomolecules like carbohydrates, protein, lipids, nucleic acid.		
<b>CO 5</b>	Learn about the enzymes and the mechanisms of enzyme action with its theoretical plot and derivations.		
<b>CO 6</b>	Ability in conceptualizing the above prescribed topics		

### SEMESTER IV

COURSE OUTCOME		PAPERS	LO & ATTAINMENT Level
<b>CO 1</b>	Have a clear idea on the anatomical difference among vertebrates through comparative study of integumentary, skeletons, nervous, digestive, respiratory, circulatory and urinogenital systems.	Core Course Paper VIII, IX & X GE -3A	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA- Continuous Internal Assessments) & ESE (End Semester Examinations)
<b>CO 2</b>	Develop comprehensive ideas on physiology of life sustaining system as study of mechanical and chemical digestion and absorption of different types of molecules, mechanism of transportation of gases with its influencing factors and regulation of water balance and excretion in renal portal system.		
<b>CO 3</b>	Develop basic ideas on physiology, functions and regulation of cardiology with formation and circulatory pathway of blood.		
<b>CO 4</b>	Develop comprehensive ideas to understand biochemical pathways of different metabolic processes.		
<b>CO 5</b>	Different pathological experiments relating to various physiological and biochemical processes might be demonstrated by students.		
<b>CO 6</b>	Students can develop to handle different types of instruments through different wet lab experiments.		

## SEMESTER V

COURSE OUTCOME		PAPERS	LO(Learning Outcome) & ATTAINMENT Level
<b>CO 1</b>	Have a clear idea on the mechanisms involved in storage, processing and transmission of bio-genetic information through DNA replication. Transcription and Translation, post transcriptional modification, RNA processing, gene regulation in Pro & Eukaryotic systems.	Core Course Paper XI & XII DSE-I &II	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA-Continuous Internal Assessments) & ESE (End Semester Examinations)
<b>CO 2</b>	Develops knowledge on principles of mendelian genetic, mutations, sex determination, inheritance, recombination in bacteria and virus & transposable genetic elements.		
<b>CO 3</b>	Describe in detail of the chronobiology and develop various ideas on several behavioral study of different animals.		
<b>CO 4</b>	Develop clear-cut ideas on health issues, its responsible immune systems and their immunological responses from MHC, cytokines, complement system, hypersensitivity and different immunoassays.		
<b>CO 5</b>	The different cytogenetical techniques like prepare different culture mediums, quantitative estimations and immunoassays handled by students in laboratory.		
<b>CO 6</b>	While a student is able to critically analyze the topics enunciated above can evaluate and state the concepts and phenomenon clearly that underlie the above-mentioned subjects.		

## SEMESTER VI

COURSE OUTCOME		PAPERS	Learning Outcome & ATTAINMENT Level
<b>CO 1</b>	Define and describe the Concepts and theories of evolutionary history and changes of different animals with origin of species.	Core Course Paper XIII & XIV DSE-III & DSE IV Project work	SGPA on basis of Credits earned from MSE (Mid Semester Examinations or CIA- Continuous Internal Assessments) & ESE (End Semester Examinations)  The final CGPA attained at the Final Semester is calculated taking all SGPA's of all semester and grading is done to award 1st/2nd Class Honors with Distinction.
<b>CO 2</b>	Study of embryological development and embryonic stages, post embryonic developments of different animals.		
<b>CO 3</b>	Thorough study of wildlife values, laws, ethics, management, trade, crime, census of wildlife animals.		
<b>CO 4</b>	Students learn the fundamentals of e-learning by searching for and downloading various research articles on Google Scholar. .		
<b>CO 5</b>	Develop writing skills on the above themes by discussing or writing in the form of brief and/or extensive, topic-specific notes.		
<b>CO 6</b>	Basic research principles, general laboratory techniques, data collecting and documentation, scientific writing and its presentation via oral, Power Point, and poster methods, and how to develop, design, and execute a science project are all covered.  A Zoology Graduate should be able to communicate, articulate, and write scientifically on any of the chapters/topics stated above after completing all six semesters.		