

PROGRAMME	PROGRAMME OUTCOMES(PO)
B.Sc. (Life Sciences)	• PO1: Acquire knowledge in Life Sciences with a thrust on fundamental principles and theories related to various scientific phenomena and their relevance in day-to-day life. • PO2: Graduates attain practical knowledge through hands-on training and project experience to meet the industrial needs. • PO3: Graduates develop critical thinking skills to identify, analyze and solve problems of their core areas using modern tools. • PO4: Ability to communicate effectively the comprehended scientific data and knowledge, write effective reports, design documentation and make effective presentations. • PO5: Ability to appreciate the benefits of experiential learning by inculcating good work habits, time management and self-discipline. • PO6: Ability to apply critical thinking, decision making, and reasoning skills in the process of quality education
	PROGRAMME SPECIFIC OUTCOMES(PSO)
B.Sc. (BZC)	• PSO 1: Emphasizes the diversity in form and function of plants and animals, create an awareness of the impact of Chemistry on the environment, society, appraise role of green chemistry in environment sustainability. • PSO 2: Students will be able to pursue higher education & focuses on scientific research, and apply this knowledge in both real life and in a laboratory setting. • PSO 3: The fundamental skills within the field of Biology and Chemistry are understood and hence can function effectively as professionals in the Life Science based industries. • PSO 4: This programme is vital to further increase their understanding of human health and environmental issues. • PSO 5: Students will be able to understand the fundamental theories, concepts and applications in four basic areas of research in Chemistry (Analytical, Inorganic, Physical & Organic). Develop the ability to explore new areas of research in Chemistry and allied field of Life sciences.

B.Sc (BZCA/BZCS)	• PSO 1: Emphasizes the diversity in form and function of plants and animals. • PSO 2: Students will be able to pursue higher education & focuses on scientific research, and apply this knowledge in both real life and in a laboratory setting. • PSO 3: The fundamental skills within the field of Biology and Zoology are understood and hence can function effectively as professionals in the Life Science based industries. • PSO 4: They will be able to use databases, computational tools, decipher scientific data and can act as a bridge between physical & life sciences. Become competent to function both in wet as well as dry labs.
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S.No.	Course Code	Course Title	Course Outcomes (CO)
1.	BS105	Paper I Animal Diversity- Invertebrates	After successfully completing this course, the students will be able to: CO1: Develop understanding on the diversity of life with regard to protists, non-chordates and chordates CO2: Understand the difference between Invertebrates and Vertebrates. CO3: Group animals on the basis of their morphological characteristics/ structures CO4: Develop an understanding of the characters used to classify besides being able to differentiate the organisms belonging to different taxa. CO5: Study the various aspects of physiology, morphology, habits, habitats and adaptations in Non-chordate and Chordate life forms. CO6: Describe pathogenesis and treatment for important diseases like Amoebiasis, Giardiasis, malaria, leishmaniasis, schistosomiasis, etc. CO7: Understand the relative position of individual organs and associated structures through dissection of the invertebrate representatives.
2.	BS205	Paper-II Animal Diversity- Vertebrates.	After successfully completing this course, the students will be able to: CO1: Develop understanding on the diversity of life of chordates. CO2: Group animals on the basis of their morphological characteristics/ structures CO3: Develop an understanding of the characters used to classify besides being able to differentiate the organisms belonging to different taxa. CO4: Study the various aspects of physiology, morphology, habits, habitats and adaptations in Chordate life forms.
3.		Paper – III –Animal	After successfully completing this course, the students

		Physiology and Animal Behaviour	will be able to: CO1: Understand the physiology at cellular and system levels. CO2: Understand the mechanism and regulation of breathing, oxygen consumption and determination of respiratory quotient. CO3: Understand how mammalian body gets nutrition from different biomolecules. CO4: Understand the process of digestion, circulation and excretion. CO5: Understand the organization of nervous system and process of nerve conduction. CO6: Understand the process of Homeostasis. CO7: Understand the process of Muscle contraction. CO8: Understand the types of behavior, types of learning, social behavior, communication and biological rhythms.
4.		SEC –I. Sericulture	After successfully completing this course, the students will be able to: CO1: Gain knowledge of types of silk worms and silk worm rearing. CO2: Study various systems of silk worm, pests and diseases associated with silk worm, cocoons, defective cocoons and reeling of silk. CO3: Study the Mulberry cultivation, pests and diseases associated with Mulberry and control measures. CO4: Gain self-employment, as the Sericulture is agro based cottage industry in India.
5.		SEC-II. Public Health and Hygiene	After successfully completing the course, the students will be able to: CO1: Identify current national and global public health problems. CO2: Aware about the issues of food safety, water safety, vaccination, exercise and obesity, exposure to toxins. CO3: Frame a public health plan during any epidemic or spread of infectious disease etc. CO4: Analyze case studies of infant mortality and obesity.

			CO5: Assess the health inequalities with regard to gender, race, ethnicity, income etc. CO6: Students may make an oral presentation and compare the health care system of India with a country having advanced one.
6.		Paper – IV – Cell Biology, Genetics, and Developmental Biology	After successfully completing this course, the students will be able to: CO1: Improve knowledge of structure and functions of Cell and Cell organelles. CO2: To understand the cellular components underlying cell division. CO3: Understand how DNA encodes genetic information and the function of mRNA and tRNA CO4: Apply the principles of Mendelian inheritance. CO5: Acquire knowledge on Mendelian and Non-Mendelian inheritance, genetic disorder, and Sex-determination. CO6: Understand the cause and effect of alterations in chromosome number and structure. CO7: Explain and contrast the processes of spermatogenesis, oogenesis. CO8: Demonstrate an understanding of the hormonal control of reproduction in males and how this is regulated CO9: Develop critical understanding how a single-celled fertilized egg becomes an embryo and then a fully formed adult by going through three important processes of cell division, cell differentiation and morphogenesis.
7.		SEC-3: Vector Biology	After successfully completing this course, the students will be able to: CO1: Develop awareness about the causative agents and control measures of many commonly occurring diseases. CO2: Develop understanding about the favorable breeding conditions for the vectors. CO3: Devise strategies to manage the vectors population below threshold levels, public health importance. CO4: Undertake measures or start awareness

			programs for maintenance of hygienic conditions, avoidance of contact from vector, destruction of breeding spots in the vicinity of houses and cattle shed by public health education campaign
8.		SEC-4: Aquaculture	After successfully completing this course, the students will be able to: CO1: Understand the aquaculture systems CO2: Understand conditioning factors and how they can be manipulated CO3: Describe water depuration mechanisms CO4: Understand the environmental impacts of aquaculture.
9.		GE1–Preventive medicine	After completing this course the learners will be able to: CO1: Develop and implement public health interventions. CO2: Engage with health systems and public health initiatives. CO3: Increase their skills, attitudes and knowledge towards causes of diseases. CO4: Apply knowledge of the principles of disease, injury prevention and control. CO5: Prepare expert educational outreach lectures and presentations. CO6: Increase their skills towards knowledge of community health improvement.
10.		GE2- Integrated Pest Management	After completing this course the learners will be able to: CO1: Able to understand the definition of pest, pest population dynamics, Economic injury level, Economic threshold and pest surveillance. CO2: Gain knowledge on the concepts of IPM, and components of IPM. CO3: Acquire knowledge on Major IPM strategies, strategies for IPM Mechanical, Physical, Cultural and Biological. CO4: Gain Knowledge on Bio control agents, and Genetic control. CO5: Acquire knowledge on chemical control.
11.		DSE-IA. Physiological Chemistry and	After successfully completing this course, the students will be able to:

		Endocrinology.	CO1: Understand the types and classification of biomolecules. CO2: Understand the structure and the metabolism of carbohydrates, amino acids, proteins, lipids and nucleic acids. CO3: Understand the enzymes, their classification and enzyme kinetics, and mechanism of enzyme action. CO4: Understand neurohormones and neurosecretions. CO5: Learn about hypothalamo and hypophyseal axis. CO6: Understand about different endocrine glands and their disorders. CO7: Understand the mechanism of hormone action.
12.		DSE-IB. Immunology and Animal Biotechnology.	After successfully completing this course, the students will be able to: CO1: Identify the major cellular and tissue components which comprise the innate and adaptive immune system. CO2: Understand how are immune responses by CD4 and CD8 T cells, and B cells, initiated and regulated. CO3: Understand how the immune system distinguish self from non-self. CO4: Impart knowledge on cells of immune system, types of Immunity, Antigen-Antibody reaction, vaccines and types of vaccines. CO5: Gain knowledge on cloning vectors, Recombinant DNA technology, transgenesis, stem cells and their applications.
13.		DSE-IIA-Fisheries and Limnology	After successfully completing this course, the students will be able to: CO1: Gain knowledge on types of Fisheries and

			Aquaculture systems. CO2: Understand Culturing and Management practices of Fisheries. CO3: Learn about Feeding, Breeding, and Hatchery management of Finfish and Shellfish. CO4: Acquire knowledge on Characteristics and distribution of fresh water bodies, and Dynamics of Lentic and Lotic environments. CO5: Understand the Influence of Physical, Chemical conditions on Living Organisms in Inland waters. CO6: Gain Knowledge on Productivity of Lakes.
14.		DSE-IIB. Ecology, Zoogeography, and Evolution.	After successfully completing this course, the students will be able to: CO1: Understand the types of Ecosystems, Biogeochemical cycles, Concept of Species, Structure and Dynamics of Community. CO2: Effects and controlling measures of pollution. CO3: Acquire knowledge about Biodiversity and Biodiversity Hotspots in India, and its Conservation. CO4: Gain knowledge regarding the distribution of animals on Earth in different regions, the evolutionary history and relationship of the animals. CO5: Understand the Origin of Life, Evolutionary theories, Natural Selection and Speciation, causes and role of extinction in Evolution. CO6: Gain knowledge regarding the distribution of animals on Earth in different regions.