RISHI BANKIM CHANDRA COLLEGE FOR WOMEN

Program Outcomes
Department of ZOOLOGY

Sl No.	PO Master Name
1	
2	Students will have knowledge of the diversity of Animal Kingdom
3	Students will learn the peculiarities of internal & external organization & functioning of the bodily systems
4	Students will be able to analyze the cytological, genetic, molecular & biochemical organization of organisms
5	Students will figure out the reasons behind diseases with reference to parasitism & immune system
6	Students will have understanding of ecosystems & conservation of biodiversity
7	Students will realize the underlying mechanisms behind the development & emergence of an organism & species
8	Students will be able to enhance their skills in fields of economic & applied zoology
9	Understands the complex evolutionary processes and behaviour of animals.
10	Correlates the physiological processes of animals and relationship of organ systems.
11	

RISHI BANKIM CHANDRA COLLEGE FOR WOMEN

Course Outcomes

Department of ZOOLOGY

Sl No.	Semester	Course Name	Course Outcome
1	1st Semester	Non-chordates (zooacor01t/p)	Co: 1 students would appreciate the diversity of lower and higher invertebrates including arthropods upto molluscs with a thorough understanding of the invertebrate animal architecture and functions during evolution. co: 2the major outcome is that the course would create awareness of the economic importance and significance of invertebrates from protista to helminth. co:3 students will be aware of the involvement of different invertebrate animals in human health and agriculture; diseases caused by invertebrates and the understanding of their modes of transmission by invertebrate animals and contribution to the formation of structures like the coral reefs. co:4 classify phylum protozoa to helminth with taxonomic keys
2	1st Semester	Ecology (zooacor02t/p)	Co: 1students would be in a position to identify the relations between the abundance and distribution of organisms in nature. co:2the course will make the students familiar with the variety of ways that organisms interact with both the physical and the biological environment. co:3 they would be able to analyze interactions within the context of specific habitats and judge how the habitat shapes the distribution and abundance of species.
3	2nd Semester	Non-chordates ii (zooacor03t/p)	Co: 1 advanced non-chordates will introduce anatomical and functional aspects of the non-chordates and protochordates (from annelida to hemichordata). co: 2 this course shall enable the student to understand the animal world better as its peculiarities co: 3the major outcome is that the course would create awareness of the economic importance and significance of invertebrates from from annelida to hemichordata. co:4 important life cycles and peculiarities of the animal world will help the student understand our animal world, its influence on humans and the environment as a whole.
4	2nd Semester	Cell biology (zooacor04t/p)	Co:1 the knowledge of cell biology will help the student understand the function unit of life. co:2 it will also lay the foundation for understanding the importance of cell biology in our lives, and address questions of cellular disorders, and associated health implications in the human society. co: 3 cell biology is an important subject in research and related to basic science, pharmaceutical industry, pathology and allied fields.
5	3rd Semester	Chordates (zooacor05t/p)	Co: 1 students would appreciate the diversity of higher invertebrates like echinodermata along with lower and higher vertebrates including the various specialties and diversities found in agnatha, pisces, amphibia, reptilia, aves and mammals with a thorough understanding of the chordate animal architecture and functions during evolution. co: 2 the major outcome is that the course would create awareness of the economic importance and significance of chordates. co: 3 students will be aware of the involvement of different chordate features such as metamorphosis, regeneration, parental care, poison apparatus and biting mechanism in snake, migration in birds and others which shall help the student in research. co: 4 a student perusing a career in research of wild life, experimental biology, zoological gardens will benefit from the knowledge and practical exposure from this course.
6	3rd Semester	Physiology: controlling and coordinating	Co: 1 students in physiology shall be introduced to the structure function relationship in terms of mammalian system which will aid them understand and interpret both medical and evolutionary observations.

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		systems (zooacor06t/p)	co:2 the combination of comparative anatomy and physiology will enable students analyze experimental outcomes in similar models. co3: explain the anatomy of various systems
7	3rd Semester	Biochemistry (zooacor07t/p)	Co:1 understanding biochemistry enables students to understand and analyse the central theme of life and its associated mechanisms. co 2:to develop concept about structure and function about biological macromolecules essential to life co:3 students can intermingle with the different streams of science to create unison of understanding of any topic of biology. co: 4 knowledge of this course will help a student understand the chemical interpretation of biological principles
8	4th Semester	Comparative anatomy (zooacor08t/p)	Co: 1the course will provide a advanced concept of the basic structural similarities, dissimilarities, uniqueness in terms of both anatomy in selected vertebrate groups. co:2 comparative knowledge of integumentary, digestive, circulatory, urinogenital, nervous and skeletal system of various classes of vertebrates.
9	4th Semester	Physiology: life sustaining systems (zooacor09t/p)	Co1: define the basic terms in physiology. co2: explain the physiological processes in mammals. co3: explain the anatomy of various systems. co4:in-depth analytical knowledge on animal physiology such as adaptation, respiration, circulation, excretion, osmoregulation, thermoregulation. co5:.daigramatically represent the working of kidney. co6: advanced concept of neurobiology
10	4th Semester	Immunology (zooacor10t/p)	Co: 1 the student shall learn how to understand, analyze, access and compare various of the various aspects of immune function/dysfunction, immune response to infection and general molecular understanding of immune function. co: 2 the course shall also equip the learner of uses to immune system in modern day treatment and analysis. this course shall be useful for students wanting to do research both as of the basic and clinical aspects of immune system. co: 3 this science finds huge application in bio-tech companies, pharmaceutical research, medical therapeutics, diagnosis and research in general.
11	5th Semester	Molecular biology (zooacor11t/p)	Co:1 apart from information the student will understand and analyse the molecular process that occur inside living organisms (cellular). co:2 this knowledge will help in designing experiments to understand the decipher/manipulate/improvise molecular puzzles. co: 3 molecular biology now centers around in more important gene manipulation in various fields of basic and clinical sciences and find huge application in bio-tech companies, crop science, medical therapeutics, diagnosis and research in general.
12	5th Semester	Genetics (zooacor12t/p)	Co:1 at the end of this course a student should have a broad knowledge about various aspects of genetics and know about the classical and molecular approaches towards understanding genes. co:2 this will enable them to have a holistic understanding of biology. co: 3they will achieve skills in analysing, comparing and explaining results of genetics experiments, and possess knowledge about various techniques used to study genetics. co: 4 this will help them to undertake research work or higher studies related to genetics in future and will also help them in competitive examinations for higher studies.
13	6th Semester	Developmental biology (zooacor13t/p)	Co:1 a student shall learn how to understand, analyze, access and compare various physical/chemical/climatic influence on development and homeostasis in animals. co: 2 the knowledge shall help the student interpret experimental results (in the specific field) and conclusions in a scientific manner. co:3 the knowledge also helps understand the various diseases where such development is not found as in cancer and or birth defects/abnormalities. co: 4 this science finds huge application in bio-tech companies, toxicological studies, medical therapeutics, diagnosis

Sl No.	Semester	Course Name	Course Outcome
			and research in general. co:5 in-depth knowledge in gamete biology and subsequent development of embryo after fertilization. co :6 put on the light on the incidence of sex determination and different kinds of intersex individuals of the society.
14	6th Semester	Evolutionary biology (zooacor14t/p)	Co:1 at the end of this course, students will possess a broad knowledge about various aspects of evolution, and will know about the morphological, population genetic and molecular approaches towards understanding evolution. co:2 students will achieve skills in developing evolutionary thinking, and be able to analyse, compare and explain evolutionary trends. co:3 they will learn to apply intelligence to understand evolutionary changes in a population genetic framework and have knowledge about various approaches used to study evolution.
15	5th Semester	Animal behaviour & chronobiology (zooadse01t/p)	Co:1 this course deals with both theoretical as experimental protocols of both the sciences. co: 2 the scope of this course is of immense importance and demands in both industry (animal breeding/rearing) and scientific/pharmaceutical laboratories. co: 3 a student perusing a career in research of wild life, experimental biology, zoological gardens will benefit from the knowledge and practical exposure from this course.
16	5th Semester	Entomology: insects and their biology (zooadse02t/p)	Co:1 insect biology is of great interest and importance in our country. co:2 entomologist are being recruited in rural areas to conduct both survey and awareness programs to control vector borne diseases. co:3 sericulture as a livelihood in west bengal is also present. co:4 human insect interaction and vector biology has gained much importance in forensic laboratories, co:5 zsi, agriculture sector, defense wing etc. co: 6 this course finds its importance both in the basic level as well as applied sectors
17	5th Semester	Endocrinology (zooadse03t/p)	Co: 1: endocrine system brings about maturation, reproduction maintenance of homeostasis, in a nutshell understand the functioning of physiology. co: 2:illustrate the reproductive cycles with hormonal control.justify the endocrine disorders. detailed knowledge of major endocrine hormones: origin, structure, regulation of synthesis, mode of actions, physiological functions, abnormalities co: 3: in-depth knowledge of sex hormones in the regulation of reproduction. concept on chronobiology and biological clock and its importance. co: 4:hands-on training the identification, isolation, fixation, and rest of histological steps with mammalian endocrine glands. skills gained: • understanding of different physiology and the interrelations among them. co: 5 on the other hand histology is one of the most powerful systems to understand experimental and diagnostic physiology. the tool if harnessed shall enable students to aid in medical diagnostic centers, fields of drug designing, toxicology, pharmaceutical science and clinical experimentations.
18	6th Semester	Zooadse04t/p dse-04: fish and fishery	Co: 1this course shall help the student in learning and establishing fish and fishery both as commercial as well as scientific disciple. co:2 the scope of fishery is of immense importance and demands in both industry and scientific laboratories. co:3 students can use this knowledge to get employment or sustain themselves by self employment. zebrafish and aquaculture are both find their application in experimental laboratories and commercial sectors.
19	6th Semester	Zooadse05t/p dse-05: parasitology	Co:1 parasitology finds great importance in both zoology, biomedical science research and in community awareness. co: the importance stems form association of these organisms with human and its life stocks. co:2 this branch of inter- disciplinary science finds its application in basic and clinical research. co: 3 it expands the understanding of biological experiments especially molecular deciphering of disease conditions arising from such association. co:4 this course finds it application in

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			understanding basic science, health physiology, drug action/discovery, pharmaceutical science, medical science, evolutionary science, diagnosis, find huge application in bio-tech companies but to name a few
20	3rd Semester	Zooadse06t/p dse-06: wildlife and conservation	Co:1 upon successful completion, students will have the knowledge and skills to articulate why society strives to conserve biodiversity. co: 2they will be able to identify key threats to biodiversity. co:3 the course will help them to evaluate which management options are likely to be effective for conserving biodiversity in different settings. co: 4 in this course, students will explore options for conserving biodiversity. co: 5 learning tools and techniques relevant to monitoring biological diversity would prepare students for future employment in this field. co: 6the course would enhance the student's ability to design a field-based project with rationale and appropriate methodology.
21	4th Semester	Skill enhancement course (sec)-zoossec01m : sec-1: aquarium fish keeping class	Co: 1fish has been a very common pet for human household. ornamental fish, their propagation and keeping provides as very profitable means of livelihood as these animals provide both aesthetic beauties coupled with emotional attachment and pleasure. co: 2the financial possibilities and outcome has made aquarium breeding of ornamental fish a very profitable cottage industry with scopes of growth and diversification. co:3 this technique also aids in research where fish is used as a biological model.
22	6th Semester	Skill enhancement course (sec) zoossec01m : sec-02m vermicompost	Co: 1the student understands the importance of vermicompost both as industry as well as a health and environmental prospect. co: 2the student learns its application to the soil along it its scope and opportunities in organic farming. co: 3 the course bring to light to the student of how this earthworm utilizing technology produces a peat co4: like cast with high water retention capacity coupled with nutrient rich substrates. co: 5 this technology has economic and environmental aspects as it produces sellable soil produced from sewage and waste
23	1st Semester	Zoogcor01t/p/ zoohgec01t/p cc-1 : animal diversity	Co:1 the student shall get an entry level detailed idea of animal kingdom. co:2 enough to teach in schools, act as a keeper of animal specimens, help in identification of species. the student will be able aid in research acting as an assistant. co: 3the major outcome is that the course would create awareness of the economic importance and significance of invertebrates and chordates from protista to mammals co: 4 classify from protista to mammals with taxonomic keys
24	2nd Semester	Zoogcor02t/p/ zoohgec02t/p cc-2 : physiology and biochemistry	Co: 1the knowledge will be in the level of entry graduate level, enough to teach in schools, act as a keeper of animal specimens, help in identification of species. co:2 exposure to practical classes shall enable the student to perform the specified regular laboratory processes. co:3 the student will be able aid in research acting as an assistant co:4 to develop concept about structure and function about biological macromolecules essential to life. co:5 : explain the anatomy of various systems. co6:in-depth analytical knowledge on animal physiology such as adaptation, respiration, circulation, excretion, osmoregulation, thermoregulation.
25	3rd Semester	Zoogcor03t/p/ zoohgec03t/p cc-3 : insect, vectors and diseases	Co:1 insect biology is of great interest and importance in our country. co:2 entomologist are being recruited in rural areas to conduct both survey and awareness programs to control vector borne diseases. co: 3this knowledge may allow them to participate in these surveys as assistants. co: 4the knowledge can be used for participation in mass awareness programs.
26	4th Semester	Zoogcor04t/p /zoohgec04t/p cc-4: environment and public health	Co: 1environment, it assessment and understanding are an essential to human survival. co:2 it's a topic endorsed by policy makers as well as industries and local administrative bodies. co: 3 employment on the basis

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			of its assessment and survey is carried by ngos, industries, research agencies and local administrative bodies
27	5th Semester	Zoogdse01t/p: dse-01applied zoology	Co:1 health science is huge part of a countries economy. co: 2 this course makes aware and sensetises students to the science of parasitism and epidemiology. co: 3this knowledge may allow them to participate in epidemiological surveys as assistants. co:4 the knowledge can be used for participation in mass awareness programs.
28	6th Semester	Zoogdse04t/p: dse-04: immunology	Co: 1 the student shall learn how to understand, analyze, access and compare various of the various aspects of immune function/dysfunction, immune response to infection and general molecular understanding of immune function. co: 2 the course shall also equip the learner of uses to immune system in modern day treatment and analysis. this course shall be useful for students wanting to do research both as of the basic and clinical aspects of immune system. co: 3 this science finds huge application in bio-tech companies, pharmaceutical research, medical therapeutics, diagnosis and research in general.