**Department of Botany**

**Program outcomes**:

The students undertaking B.Sc. Botany will

1. Have appreciation of diversity of plant world and will be able to identify and differentiate major groups of plants on the basis of diverse characters

2. They will develop understanding of process and patterns of evolution of different plant groups.

3. The students will thoroughly understand the fundamental plant processes and metabolism and to some level the factors controlling these processes and metabolic activities.

5. They will learn the principles of interconnected life and life process and flow of energy, nutrients.

4. They will develop the capability to manage the natural resources by understanding the underlying principles of interactions between organism and its environment.

5. The students will learn the basic practical skills of handling and working on plant resources. They will have an exposure about industrial application of plant resources and exploration for use to meet the needs of society.

6. The understanding of functioning of plants at cellular level, Control at DNA and gene level transmission and inheritance of genetic information

7. The students will learn to use the modern teaching learning tools and will become digitally equipped.

8. They will develop inquisitiveness and learn basic research techniques about the plant world and may venture into taking up advanced research on different unknown aspects of fascinating plant world.

9. The knowledge, skills and competencies acquired while pursuing the program will facilitate the students in gaining employment.

**Course outcomes with Course code**

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| Course Code | Course Title | Course Learning Outcomes |
| BOTA101 | Biodiversity(Microbes, Algae, Fungi and Archigoniate) | On completion of the course the students will   * Appreciate the diversity among Viruses, Bacteria, Algae, Fungi, Bryophytes and Pteridophytes. * Understand the taxonomic positions/status and basic evolutionary trends in different groups of plants. * Understand the structure and life cycle of viruses, bacteria and Algae, Fungi, Bryophytes and Pteridophytes through study of general account and life history of representative members from each group. * Know the useful and/ or harmful aspects of different groups. |
| BOTA102 | Plant Ecology and Taxonomy | The students will   * Be able to understand the types of interactions of an organism with its environment and the principles underlying these interactions. * Understand the role of different ecological factors like soil, water, light, temperature in occurrence and distribution of plants. * Know about morphological, anatomical and physiological adaptations shown be plants in response to diverse environmental conditions. * Develop understanding of structure and functioning of different ecosystems; energy flow, trophic organisation nutrient cycling, biogeochemical cycling etc * Understand the basic concepts of taxonomy and its development in historical perspectives. * Learn to identify and classify the plants with the help of different tools and techniques. * Learn the principles and rules of Botanical nomenclature * Learn about Herbarium practices, role of Botanical garden through literature and on-sight visits. * Learn about the popular and most acceptable system of classifications * Learn about the taxonomic evidences and modern methods of taxonomy * Understand the diversity among flowering plants. |
| BSCBOT0203 | Palaeobotany and Gymnosperms | * Will acquire knowledge about fossils, process of fossilization and important fossil plants. * Appreciation about general characters, life cycle, current diversity status and economic importance of Gymnosperms. * Know about morphology, anatomy and reproduction of representative members. |
| BSCBOT0204 | Plant Taxonomy and Selected Families of Angiosperms | * The student will learn about the origin and evolution of flowering plants * Know the rules of naming and classifying the plants * Will study the most accepted systems of classification * Will become acquainted with role of Botanical gardens and herbaria. * Will be able to appreciate the floral diversity. |
| BSCBOT0305 | Economic Botany and Plant Anatomy | The students will   * Know the centres of origin and diversification of major crops * Know the major research institutes related to plant improvements * Learn about the distribution and cultivation of main cereals, vegetables, medicinal plants, Spices, fibre, timber and sugar yielding plants. * understand the basic body plan of the plants; different types of tissues constituting the body * Internal structure of plant organs and adaptive and protective strategies in internal structure. * Know the Vascular systems * Understand the Process of secondary growth |
| BSCBOT0306 | Embryology of Angiosperms | The student will   * Know the structure and function of various floral parts * Know the detailed structure of male reproductive parts of flowers and process of pollen and male gamete development. * Know the structure of female reproductive part and process of ovule and female gamete development. * Understand the process of fertilization and embryo, seed and fruit development. * Appreciate the different methods of pollen transfer and seed dispersal. |
| BSCBOT0407 | Cytogenetics | * Understand the major basic principles of genetics, the laws of inheritance * Understand the concept of linkage and crossing over, genetic recombination * Preparation of karyotype * Know the various types of alterations/ mutations in chromosomes and consequences * Knowledge of genetic material and process of its replication. * Knowledge of mechanism of protein synthesis and gene regulation. * Understanding of extranuclear inheritance. |
| BSCBOT0409 | Cell Biology | The student will Understand/ know the   * cellular organization of different organisms * Structure and functions of Basic macromolecules of cell * Basic t tools and techniques used in study of cell structure * Ultra-structure of cell organelles * Structure and types of chromosomes; Basics of cell division |
| BSCBOT0510 | Biochemistry | The student will understand   * The basic chemistry of living systems   Structure and role of enzymes   * Carbohydrate, Protein and Lipid Metabolism * Nitrogen fixation and metabolism |
| BSCBOT0511 | Biotechnology | On completion of the course the student will have knowledge of   * the history of development of biotechnology; scope and importance of biotechnology * principles and techniques of genetic engineering, plant tissue culture, microbial cultures * Industrial biotechnological processes. |
| BSCBOT0613 | Ecology | The students will   * Understand the interactions among organisms and environment and the principles underlying these interactions. * Understand the role of different ecological factors like soil, water, light, temperature in determining growth, and distribution of plants. * Know about morphological, anatomical and physiological adaptations shown by plants in response to diverse environmental conditions. * Develop understanding of structure and functioning of different ecosystems; energy flow, trophic organization, nutrient cycling, biogeochemical cycling etc * Know the vegetation types, biogeographical and botanical regions of India. * Have knowledge of environmental pollutants and pollution and remedial measures |
| BSCBOT0614 | Plant Physiology | On completion of the course the student will   * Understand the importance of water to plant life and water relations of plants * Role of essential nutrients in plants * Understand the absorption and transport of water and nutrients * Develop the understanding of basic mechanism of photosynthesis and respiration * Role and mechanism of action of plant hormones * Physiology of seed germination * Have understanding of different plant movements |

**Department of Chemistry**

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| **Programme** | **Programme Outcomes** | **Programme Specific Outcomes** |
| Chemistry | ● To Gain knowledge of Chemistry through theory and practicals.  ● Students will be able to solve problems by identifying the typical parts of a problem and working with a strategy. They could apply appropriate techniques to achieve a solution, correctness and interpretation of calculated results.  ● Students will be able to use standard laboratory equipment, modern instrumentation, and classical techniques to carry out experiments, as well as interpretation of data generated in instrumental chemical analyses upon completion of a B. Sc degree in Chemistry.  ● To Equip the students with the skill to analyse and solve the problems. | Students will know proper regulations and procedures for safe handling, storage and use of chemicals. Hence will become eco-friendly and eco-protective, an ability to determine hazards associated with carrying out chemical experiments in terms of chemical toxicity, chemical stability and chemical reactivity and be able to find information to enable effective risk assessments to be carried out.  ● Students will have strong foundations in basic principles and theories of the main areas of organic, inorganic, analytical, physical and biological chemistry and will be able to apply chemical knowledge in many applications. Students will understand the ethical, historic, philosophical, and environmental dimensions of problem |

**COURSE OUTCOMES.**

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| Paper Code | Paper Title | Course outcome |
| CHEM CC 101 | Atomic Structure, Bonding, General Organic Chemistry and Hydrocarbons | ● Knows about Atomic structure quantum model. Bohr's Theory and its limitations, Schrodinger Wave Equation and its function, quantum numbers. Slater rules and its applications and limitations.  ● Explains ionic and covalent bonding with VBT and VESPER and MOT .  ● Physical effects and electronic displacement in organic molecules. ● Reactive intermediates.  ● Conformational, optical and geometrical type of stereoisomerism and assignment of configuration  ● Preparation reaction and structure of alkenes, alkenes and alkynes. |
| CHEM CC 101P CORE COURSE | Atomic Structure, Bonding, General Organic Chemistry and Hydrocarbons Lab | ● Experimentally performs volumetric determination by neutralization and redox titrations that provokes analytical skills in students.  ● In organic qualitative analysis to detect the extra element nitrogen, sulphur and halogens present in the organic compound  ● To separate the mixture by chromatography prepares students to learn separations using this technique in industrial as well as medical areas. |
| CHEM CC 202 CORE COURSE | Chemical Energetics, Equilibria & Functional Group Organic Chemistry | ● Basic laws and principles of Thermodynamics.  ● Detailed description of chemical equilibrium..  ● Preparation and chemical reaction of Alkyl halide, alcohol and phenol, aldehydes and ketones root into the understanding of their physical and chemical properties. |
| CHEM CC 202 P CORE COURSE | Chemical Energetics, Equilibria & Functional Group Organic Chemistry | ● Enthalpy of neutralization of HCl with NaOH  ● Heat capacity of calorimeter.  ● The students develop keen interest in the basic concepts of thermodynamics.  ● To determine the pH value of different solutions using pH-meter  ● The synthesis and purification of the organic compounds by crystallization and distillation |
| CHEM 305 CORE COURSE | Organic Chemistry | ● Study of Basic concepts alkynes ,arenes, alkylhalide and alcohols and and their important chemical reaction such as hydroboration, oxidation, reduction etc  ● Study of aromatic, antiaromatic and annulenes. |
| CHEM 305 P CORE COURSE | Organic Chemistry | ● Preparation of various organic compounds such as iodoform, Glucosazone, aspirin and parabromoacetanilide.  ● analytical technique TLC |
| CHEM 306 CORE COURSE | Physical Chemistry | ● study of reaction kinetics and theories of kinetics.  ● various concepts about catalysis  ● concepts about thermodynamics and thermochemistry |
| CHEM 306 P CORE COURSE | Physical Chemistry | ● Experimental study of chemical kinetics.  ●Study of heat of neutralization, solution and water equivalent |
| CHEM 407 CORE COURSE | Inorganic Chemistry | General group trends within transition elements, lanthanides and actinides.  ● Transition elements play a crucial role in industrial catalytic processes that are required to produce substances and new materials at a rate far exceeding that of natural chemical reactions.  ● detailed study of co-ordination compounds and acid, Bases. |
| CHEM 407 P CORE COURSE | Inorganic Chemistry | ● Semi-micro qualitative analysis of inorganic mixture.  ● Detailed description of complexometric titrations  ● From this lab course students learn about analysis of unknown inorganic compounds, complexometric titration. |
| CHEM 408 CORE COURSE | Organic Chemistry | ● Study of various organic compounds such as phenols, ethers, amines, diazonium salts, aldehydes, ketones and carboxylic acids. |
| CHEM 408 P CORE COURSE | Organic Chemistry Practical | ● Qualitative organic analysis i.e analysis of various organic compounds  ●determination of melting and boiling points of various organic compounds |
| CHEM 409 CORE COURSE | Physical Chemistry | Study of laws thermodynamics, phase equilibria and phase rules,  ● study of various solid solution |
| CHEM 409P CORE COURSE | Physical Chemistry Practical | Estimation of ions by using photocolorimeter,  ● determination of molecular weight, CST |
| CHEM 510 | Inorganic Chemistry | ● Study of metal ligand bonding in transition metal complexes, CFT and its applications  ●Magnetochemistry, thermodynamic and kinetic aspects of metal complexes.  ●Electronic spectra of transition metal complexes  . |
| CHEM 510 P | Inorganic Chemistry Practical | ● Preparation of various inorganic compounds  ●Volumetric analysis |
| CHEM 511 | Organic Chemistry | ● Study of UV, IR, NMR and mass spectroscopic techniques and teir application to characterize various organic compounds. |
| CHEM 511 P | Organic Chemistry Practical | ● Estimation of acid value, iodine value and saponification value  ● Preparation of polymer nylon-66  Purification of various solvents through simple distillation. |
| CHEM 512 | Physical Chemistry | ● Detailed study of solutions, Colligative properties, chemical equilibria and electrochemistry |
| CHEM 512 P | Physical Chemistry Practical | ● Characterization of various compounds through Conductuctanc measurement and conductometric titrations  ● Study of adsorption phenomenon, separation of organic mixture by solvent extraction. |
| CHEM 613 | Inorganic Chemistry | ● Preparation, Classification of Organometallic compound, detailed description of metal carbonyls.  ● Introduction to bioinorganic chemistry, role of metal ions in biological system and stabilization of protein structure.  ● study of Inorganic polymers, nonaquous solvents Perfumes etc  ● various aspects of environmental chemistry |
| CHEM 613 P | Inorganic Chemistry P | ●Quantitative estimation of various ions via gravimetric analysis  ● preparation of various inorganic complexes |
| CHEM 614 | Organic Chemistry | ● Detailed study of carbohydrates, Photochemistry  ● Preparation, Classification of Organometallic compound, detailed description of metal carbonyls  ●Understand heteronuclear chemistry involving aromatic compound, their properties  ● Study of synthetic dyes and polynuclear hydrocarbons |
| CHEM 614 P | Organic Chemistry Practical | ● Extraction of pigments from tomato, proteins from milk.  ● Preparation of benzopinacolone .  ● Preparation of various dyes. |

**Department of Mathematics**

**Programme Specific Outcomes (Mathematics)**

By the end of the program UG in Mathematics, the student will be able to:

1. Demonstrate in-depth knowledge in one of the foundational areas of the mathematical sciences.
2. Think in a critical manner.
3. Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand. Formulate and develop mathematical arguments in a logical manner.
4. Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
5. Understand, formulate and use quantitative models arising in mathematical science and other contexts.

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| **SEMESTER/YEAR** | **COURSE CODE** | **COURSE TITLE** | **OUTCOMES** |
| **III rd Sem** | **BA/BSCMATH0305** | **Sequence & Series** | Sequences and series are most useful when there is a formula for their terms. Sequences and Series play an important role in various aspects of our lives. Students would learn about the behavior of real sequences and their convergence and divergence. It gives an opportunity for the students to learn about different type of tests. |
|  | **BA/BSCMATH0306** | **Statics & Dynamics** | Students must be in a position to analyse and solve the practical problems of statics and dynamics. Dynamics is a very important element in music. Without it, all of our music will be flat and boring. Through the use of dynamics, musicians are able to create drama and different intensities throughout a piece, making music fascinating and enjoyable. Dynamics is the study of the motion of objects (i.e. kinematics) and the forces responsible for that motion. ... Nothing that moves can be analyzed without using dynamics concepts. It is also important for understanding everyday things that are of interest to many of us, such as the physics of sports, and amusement parks. |
| **IV Sem** | **BA/BSCMATH0407** | **Vector Calculus** | Vector calculus plays an important role in differential geometry and in the study of partial differential equations. It is used extensively in physics and engineering, especially in the description of electromagnetic fields, gravitational fields, and fluid flow. Students would learn about the behavior of vector calculus. Vectors have many real-life applications, including situations involving force or velocity. |
|  | **BA/BSCMATH0408** | **Real Analysis** | Real analysis is an area of analysis that studies concepts such as sequences and their limits, continuity, differentiation, integration and sequences of functions. Real Analysis enables the necessary background for Measure Theory. Measure theory is further used in the study of Stochastic Differential Equations (Finance, Signal Processing), Stochastic Geometry (Wireless Communications), Topology (Topological Data Analysis) and many more. With the help of Real analysis students will be able to understand the economy. |
|  | **BA/BSCMATH0409** | **Abstract Algebra** | Students will have a working knowledge of important mathematical concepts in abstract algebra such as definition of a group, order of a finite group and order of an element. Students will gain experience and confidence in proving theorems. Students will have a working knowledge of important mathematical concepts in abstract algebra such as definition of a group, order of a finite group and order of an element. Students will be knowledgeable of different types of subgroups such as  • normal subgroups, cyclic subgroups and understand the structure and characteristics of these subgroups. Students will be introduced to and have knowledge of many mathematical concepts.  • teaching method will be used requiring the students to prove theorems give the student the experience, knowledge, and confidence to move forward in the study of mathematics. |

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| **SEMESTER/YEAR** | **COURSE CODE** | **COURSE TITLE** | **OUTCOMES** |
| Vth SEM | BA/BSCMATH0510 | Partial Differential Equations | Student will be able to solve partial diff. equation. Partial differential equations are used to mathematically formulate, and thus aid the solution of, physical and other problems involving functions of several variables, such as the propagation of heat or sound, fluid flow, elasticity, electrostatics, electrodynamics, etc. Partial derivatives are useful in analyzing surfaces for maximum and minimum points and give rise to partial differential equations. As with ordinary derivatives, a first partial derivative represents a rate of change or a slope of a tangent line. This topic has many applications in engineering sciences. |
|  | BA/BSCMATH0511 | Linear Algebra | Students will be able to find real-world applications of linear algebra include ranking in search engines, decision tree induction, testing software code in software engineering, graphics, facial recognition, prediction and so on. Also, functional analysis, a branch of mathematical analysis, may be viewed as the application of linear algebra to spaces of functions. Linear algebra is also used in most sciences and fields of engineering, because it allows modeling many natural phenomena, and computing efficiently with such models. |
|  | BA/BSCMATH0512 | Complex Analysis | Students will be able to understand function of complex variable. Complex analysis is the study of functions that live in the complex plane, that is, functions that have complex arguments and complex outputs. The main goal of this module is to familiarize ourselves with such functions. Complex analysis show up everywhere in mathematics and physics. |
| **VI Sem** | BA/BSCMATH0613 | Advanced Calculus | Students will be able to perform the vector calculus operations by applying addition, subtraction, scalar multiplication, dot product, and cross product. Students will be able to take derivatives of multivariable functions by using appropriate rules.  Students will be able to apply differential and integral calculus to notions of curvature and to improper integrals. Apart from some other applications they will have a basic understanding of Beta and Gamma functions. Acquire knowledge of advanced differential calculus for single variable and their applications. 4. Get acquainted with the knowledge of functions of several variables. Apply knowledge of differential and integral calculus of several variables for engineering applications. |
|  | BA/BSCMATH0614 | Numerical Analysis | 1. Students will be able to apply Numerical analysis in day to day life. The great advantage of using numerical analysis is that it investigates and provides accurate solutions to real-life problems from the field of science, engineering, biology, astrophysics and finance. Numerical Analysis: Estimation of ocean currents, modeling combustion flow in a coal power plant, Airflow patterns in the respiratory tract and Regional uptake of inhaled materials by respiratory tract. |
|  | BA/BSCMATH0614  (P) | Numerical Analysis | Student will be able to find constants, variables and data types, operators and expressions, managing input and output operations, decision making and branching if statement, if-else, nesting of if-else, statements switch statement go to statement, decision making and looping statement, while statement, do statement, for statement. The great advantage of using numerical analysis is that it investigates and provides accurate solutions to real-life problems from the field of science, engineering, biology, astrophysics and finance. |
| **Ist Sem** | Differential Calculus | MATH101 | Students will be able to understand the basic concepts and principles of neighborhood of a point and limits. They will be also able to define the basic concepts and principles of differential calculus of real functions, interpret the geometric meaning of differential calculus, apply the concept and principles of differential calculus to solve geometric and physical problems. Analyze the properties of functions in daily life. They will be also able to organize solving of complex problems by combining the acquired mathematical concepts and principles. |
| **2nd Sem** | Differential Equations | MATH102 | Student will get working knowledge of basic application problems described by second order linear differential equations with constant coefficients. Differential equations play a prominent role in engineering, physics, economics, and other disciplines. Differential equations applications in real life are used to calculate the movement or flow of electricity, motion of an object to and fro like a pendulum, to explain thermodynamics concepts. In medical terms, they are used to check the growth of diseases in graphical representation. |

**DEPARTMENT OF ZOOLOGY**

**Program Outcomes**

This program is one of the most fundamental units of basic sciences studied at undergraduate level. The program helps to develop scientific tempers and attitudes, which in turn can prove to be beneficial for the society since the scientific developments can make a nation or society to grow at a rapid pace.

After studying this program, students will be more equipped to learn and know about different biological systems, their coordination and control as well as evolution, behavior and biological roles of the animals in the ecosystem. Students will be able to identify the relationship or synchronization between structure and function at all levels: molecular, cellular, and organism. Students should be able to identify, classify and differentiate diverse chordates and non-chordates based on their morphological, anatomical and systemic organization. They will also be able to describe economic, ecological and medical significance of various animals in human life. Moreover, they will be able to qualitatively and quantitatively analyze evolutionary parameters using various bioinformatics and computational tools used in modern sciences. This will provide them ample opportunities to explore different career avenues.

The program will also provide a platform for classical genetics in order to understand distribution or inheritance of different traits and diseases among populations, their ethnicity and correlate with contemporary and modern techniques like genomics, meta-genomics, genome editing and molecular diagnostic tools.

After the completion of this course, students have the option to go for higher studies from India or abroad, i.e., M. Sc. /M. Phil. / Ph.D. and then do research work for the welfare of mankind and seek jobs in academia, research or industries. After higher studies, students can join as scientist or assistant professor or science teacher and can even look for professional job oriented courses, such as Indian Civil Services, Indian Forest Service, Indian Police Service etc.

Science graduates can go to serve in industries or may opt for establishing their own industrial unit. Practical and theoretical skills gained in this program will be helpful in designing different public health strategies for social welfare. The program has been designed to provide in-depth knowledge of applied subjects viz. medical diagnostics, apiculture, sericulture, aquarium fish keeping etc., ensuring the inculcation of employment skills so that students can make a career and become an entrepreneur in diverse fields. After the completion of the BSc. degree there are various other options available for the science students.

**Carrier Opportunities**

Zoology courses are a preferred choice of those who feel an affinity towards caring for the creatures of the animal kingdom. While a bachelor’s degree gives an all-encompassing understanding of the [**branches of Zoology**](https://leverageedu.com/blog/branches-of-zoology/), many feel the need to dig deeper and to explore the immensely vast animal world. Furthermore, with the need for animal and nature conservation becoming more than ever before, the demand for individuals who are aware of the issues prevalent in this field and possess expertise in integrating technology with Zoology has also soared. After **[BSc. Zoology](https://leverageedu.com/blog/bsc-zoology/)**, students can further explore a wide range of career opportunities.

Candidates find opportunities in government departments, environmental agencies, universities, colleges, biotechnological, pharmaceutical, environmental/ecological fields. There are numerous career opportunities for candidates completing their B.Sc, M.Sc and Ph.D. in Zoology in public and private sector. Candidates may find jobs as Animal Behaviorists, Conservationist, Wildlife Biologist, Zoo Curator, Wildlife Educator, Zoology faculty, Forensic experts, Lab technicians, Veterinarians etc.

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| **CLASS** | **SEM** | **PROGRAMME** | **COURSE STUDY OUTCOMES** |
| BSc.III | Sem-V | BSCZOO0409  CELL BIOLOGY | The students will to be able to understand fundamental principles of cell biology, structure and functions of cell organelles, cell signaling, appreciate how cells grow, divide, survive, die and regulate these important processes. |
| BSCZOO0510  BIOCHEMISTRY | The students will to be able to understand essentials of the metabolic pathways along with their regulation and the principles, instrumentation and applications of Bio-analytical techniques. |
| BSCZOO0511  BIOTECHNLOGY | The students will to be able to use or demonstrate the basic techniques of biotechnology like DNA isolation, PCR, transformation, restriction digestion etc.,  Ethical and social issues regarding GMOs and designing a project for research and execute it. |
| Sem-VI | BSCZOO0512  MOLECULAR BIOLOGY | The students will to be able to describe the basic structure and chemistry of nucleic acids, replication machinery and regulatory mechanisms in prokaryotes and eukaryotes. |
| BSCZOO0613  ECOLOGY | The students will to be able to demonstrate the key concepts in ecology and apply the basic principles of ecology in wildlife conservation and management.  Inculcate scientific quantitative skills, evaluate experimental design, read graphs, and analyze and use information available in scientific literature. |
| BSCZOO0614  APPLIED ZOOLOGY | The students will to be able to understand the variation amongst parasites, parasitic invasion in both plants and animals; applicable to medical and agriculture aspects.  Develop skills and realize significance of diagnosis of parasitic attack and treatment of patient or host. |
| BSc.II | Sem-III | BSCZOO0305  DEVELOPMENTAL BIOLOGY | The students will to be able to understand the events that lead to formation of a multicellular organism from a single fertilized egg, the zygote. Describe the general patterns and sequential developmental stages during embryogenesis;and understand how the developmental processes lead to establishment of body plan of multicellular organisms. |
| BSCZOO0306  ANIMAL PHYSIOLGY | The students will to be able to know basic human physiology and correlate with histological structures, Understand how animals maintain an internal homeostatic state in response to changes in their external environment and |
| Sem-IV | BSCZOO0407  CYTGENETICS | The students will to be able to have a deeper understanding of the varied branches of the biological sciences like microbiology, evolutionary biology, genomics and metagenomics and gain knowledge of the basic principles of inheritance. |
| BSCZOO0408 EVOLUTION BIOLOGY | The students will to be able to gain knowledge about the relationship of the evolution of various species and the environment they live in. Get motivated to work towards mitigating climate change so that well adapted species do not face extinction as a result of sudden drastic changes in environment.  Use knowledge gained from study of variations, genetic drift to ensure that conservation efforts for small threatened populations are focused in right direction. Predict the practical implication of various evolutionary forces acting on the human population in the field of human health, agriculture and wildlife conservation. |
| BSc. I | Sem-I | BSCZOO0101  INVERTEBRATES-I  BSCZOO0102  INVERTEBRATES-II | The students will to be able to understand about the importance of systematics, taxonomy and structural organization of animals living in diverse habitats and explore evolutionary history and relationships of different non-chordates through practical sessions, team work, group discussions, assignments and projects. |
| Sem-II | BSCZOO0203  BIOLOGY OF CHORDATES-I  BSCZOO0204  BIOLOGY OF CHORDATES-II | The students will to be able to understand about the importance of systematics, taxonomy and structural organization of animals living in diverse habitats and explore evolutionary history and relationships of different chordates, through practical sessions, team work, group discussions, assignments and projects.  Comprehend the circulatory, nervous and skeletal system of chordates. |