

## **Programme outcome, Programme Specific Outcome and Course Outcome**

### **Programme outcome:**

#### **1. Programme : Bachelor of Arts (B.A.)**

A student, after successfully completing this three year programme,

- i) Would emerge as a literate person matured enough to critically examine the problem in real world phenomenon and draw logical inference;
- ii) Developed various communication skills such as reading, listening, speaking, etc., which will help in expressing ideas and views clearly and effectively ;
- iii) Imbided ethical, moral and social values in personal and social life leading to highly cultured and civilized personality
- iv) Would be able to express his or her intellectual awareness on social values and reflect on his/her cultural identities.

After graduation one may further -

- i) Opt for higher studies in different branches of social science or
- ii) Attempt different competitive examinations for job or
- iii) Choose, with confidence, an avenue of self-employment.

#### **1.1. Programme Specific Outcome and Course Outcome :**

##### **1.1.1. B.A. in Assamese (Honours & Non-honours)**

### **Programme Outcome:**

The undergraduate programme on Assamese (Hons) deals with the language and linguistics and the history of evolution from its origin to contemporary Assamese literature. The course also includes Indian and western literature as basis for study of Assamese prose and poetry. This course emphasizes on study of cultural history of Assam for cultural tourism and enhancing communicative skills of Assamese language.

### **Course outcome:**

After completion of this course, the students will learn about:

1. History of Assamese literature
2. The Assamese language, its linguistics and other dialects of Assam.

3. Assamese prose and poetry
4. An introduction on scripts of Assam.
5. An idea on the scope on tourism industry based on the cultural environment and resources of Assam.
6. Communicative Assamese and
7. Teaching of Assamese literature.

**Programme Specific Outcome: B.A. in English (Honours & Non-honours)**

**COURSE OBJECTIVES:**

The objectives of this course are

1. To acquaint the students with the rich cultural heritage of ancient Indian literature, especially Sanskrit Literature and Indian classical literature,
2. Learners will be acquainted with immortal classics. They get to learn about the difference between the Greek classics and the Latin classics, the different genres dabbled in by the classical writers, such as, tragedy, comedy, epic, satire, criticism and so forth.
3. To prepare students for work in high level English courses in which research writing is a requirement.
4. To introduce students to the theory, fundamentals and tools of communication and to develop in them vital communication skills which should be integral to personal, social and professional interactions.
5. To acquaint learners with some of the most representative Prose Pieces and Short Stories in the western literary and cultural canon.
6. To acquaint and sensitise learners to the issues of caste/class, race , gender and violence that have become so much a part of everyday discourse.
7. To introduce learners to the most outstanding works produced in Modern Indian literature
8. Making the learners understand and appreciate the best of British literature from the Renaissance to the nineteenth.
9. To read literary texts across culture and space.

10. Focuses on proficiency in the skills of Listening, Speaking, Reading and Writing English.

**Course Outcome:**

After completing this course, the learner shall be in a position to

1. Understand and appreciate the rich Indian classical literary tradition including its distinctive aesthetic philosophies.
2. Understand the source of Western literary paradigm
3. Demonstrate and apply knowledge of basic essay structure, including introduction, body and conclusion; employ the various stages of the writing process, including pre-writing, writing and re-writing; employ descriptive, narrative and expository modes; demonstrate ability to write for an academic audience; write concise sentences, etc.
4. Find a difference in their personal and professional interactions.
5. Get acquainted with social issues, including the politics of how these are constructed, reinforced and sustained.
6. Proficiency in the skills of Listening, Speaking, Reading and Writing.

**Programme Specific Outcome: B.A. in Economics (Hons & non-Hons)**

**Programme Outcome:**

The objectives of this course are to enlighten the students with:

1. The basics of mathematics that enables the study of economic theory at the undergraduate level.
2. The basic concepts and terminology that are fundamental to statistical analysis and inference.
3. Basic concepts of Microeconomics & Macroeconomics theories.
4. Major trends in economic indicators in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points.
5. Economic development in India
6. Microeconomic framework to analyze, among other things, individual choice in the demand for health and education, government intervention and aspects of

inequity and discrimination in both sectors. It also gives an overview of health and education in India.

7. Applied econometric analysis and develop skills required for empirical research in economics.
8. Key aspects of Indian economic development during the second half of British colonial rule.  
To the theory and functioning of the monetary and financial sectors of the economy.
9. The theory of public economics, Indian public finances and corporate finance.
10. Economic implications of environmental policy as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments.
11. Models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy.
12. The characteristics as well as the current issues of the economy of North-East India.
13. The historical developments in the economic thoughts propounded by different schools

**Course outcome:**

On successful completion of this course a student will be able to get an idea about:

1. Development of India as well as North-East India.  
Get acquainted with the study of On successful completion of this course a student will be able to:
2. Understand the basic concepts of Micro & Macro Economics
3. Get acquainted with the basics concepts of Public Economics and Fiscal Policy Design
4. Get acquainted with some Statistical and Mathematical methods that are applied in Economics

5. Get acquainted with the measurement of growth and development with the help of Economic theories.
6. Understand the History of Economic Thought put forward by different schools
7. Understand some of the basic concepts relating to Monetary Analysis and Financial Marketing with reference to India in comparison to world scenario.
8. Get acquainted with the basic concepts of Environmental Economics and solution to various environmental problems.
9. Get acquainted with International Economics.
10. Get acquainted with the developmental issues of Indian Economy and enables learners to understand the problems in theoretical analysis and practical outcome with quantitative reasoning.

**Programme Specific Outcome: B.A. in Political Science (Hons & non-Hons)**

The objectives of this course are to:

1. Acquaint the students with the constitutional design of States' structure and institutions, and their actual working over time.
2. Help the student familiarize with the basic normative concepts of political theory.
3. Familiarize students with the basic concepts and approaches to the study of comparative politics
4. Provide an introduction to the discipline of public administration
5. Equip students with the basic intellectual tools for understanding International Relations
6. Train the students with the application of comparative methods to the study of politics.
7. Provide an introduction to the interface between public policy and administration in India.
8. Introduce students to the key debates on the meaning and nature of globalization by addressing its political, economic, social, cultural and technological dimensions

9. Introduce the specific elements of Indian Political Thought spanning over two millennia.
10. Expose the students to the manner in which the questions of politics have been posed in terms that have implications for larger questions of thought and existence.
11. Acquaint the students with the politics of contemporary Assam and its neighbouring states.
12. Build an understanding of human rights among students through a study of specific issues in a comparative perspective
13. Introduce students to the conditions, contexts and forms of political contestation over development paradigms and their bearing on the retrieval of democratic voice of citizens
14. Provides a theoretical and practical understanding of the concepts and methods that can be employed in the analysis of public policy
15. Teach students the domestic sources and the structural constraints on the genesis, evolution and practice of India's foreign policy
16. Course introduces the historical legacies and geopolitics of South Asia as a region
17. Help students understand the struggle of Indian people against colonialism.
18. Familiarize the students with the different theoretical approaches; give a brief overview of the history of the evolution of the modern capitalist world; highlight the important contemporary problems, issues and debates on how these should be addressed.
19. Introduce students to key instances of Gandhi's continuing influence right up to the contemporary period and enable them to critically evaluate his legacy.
20. Introduce Ambedkar's ideas and their relevance in contemporary India,
21. Understand the process of globalization from a political perspective
22. Course provides a comprehensive introduction to the most important multilateral political organization in international relations

### **Course Outcome:**

On successful completion of this course a student will be able to:

1. Get an idea about The conflicts in constitutional provisions, and shows how these have played out in political practice.
2. Make critical and reflective analysis and interpretation of social practices through the relevant conceptual toolkit and also get familiarize with the working of the Indian state, paying attention to the contradictory dynamics of modern state power
3. Examine politics in a historical framework while engaging with various themes of comparative analysis in developed and developing countries
4. Understand the contemporary administrative developments.
5. Learn about the key milestones in world political history and equip themselves with the tools to understand and analyze the same from different perspectives
6. Understand some of the range of issues, literature, and methods that cover comparative politics.
7. Understand the issues of decentralization, financial management, citizens and administration and social welfare from a non-western perspective
8. Get an insight into key contemporary global issues such as the proliferation of nuclear weapons, ecological issues, international terrorism, and human security
9. Get a sense of the broad streams of Indian political thought with a specific knowledge of individual thinkers and texts of modern political thought.
10. Have proper understanding of the politics of contemporary Assam and its neighbouring states of North-east India.
11. Understand myriads of political issues like Human Rights, India's Foreign Policy, Contemporary Political Economy, Democratic Awareness with Legal Literacy, Legislative Practices and Procedures etc.

### **Programme Specific Outcome: B.A. in History (Hons & non-Hons)**

The objectives of this course are to acquaint the students with:

1. The Ancient Indian History as well as history of the ancient world
2. Social formations and cultural patterns of the medieval world

3. History of Assam from the 13<sup>th</sup> century to the occupation of Assam by the English East India Company in the first quarter of the 19th century
4. the history of India from the known earliest times to the coming of the Mughals to India in the first quarter of the 16<sup>th</sup> century
5. the history of India during the period: ( 1526 – 1947)
6. the rise of the modern west

**Course outcome:**

On successful completion of this course a student will be able to :

1. Get acquainted with the various ancient cultures, the technological, economic, political and religious development of the period concerned.
2. Get acquainted with the evolution of humankind, the beginning of food production, Bronze Age, advent of iron, the slave society in ancient Greece, the economy and the political culture of the ancient Greece.
3. Learn about the (i) agrarian economy, the growth of urban centers in northern and central India, trade routes and coinage, (ii) Process of state formation and the Mauryan and post-Mauryan polities (iii) Land grants, land rights and peasantry, urban decline and religious traditions of early India
4. Get acquainted with the major stages of developments in the political, social and cultural history of Assam during the period: (1228 –1826)
5. Get acquainted with (i) the Roman Empire, slave society, the cultural and trade. (ii) the crisis and disintegration of the Roman Empire (iii) Economic development in Europe from 7th to 14th centuries covering production, technological developments, growth of towns and trade and feudal crisis
6. Get a comprehensive idea of the developments in India in all spheres of life during the period from earliest time to 1526
7. Get acquainted with- transition from feudalism to capitalism, renaissance, social reformation economic developments of the sixteenth century, emergence of European State System, Industrial revolution in Europe in the 17<sup>th</sup> century, English civil war, Rise of Modern Science &Scientific Revolution and American Revolution.

**Programme Specific Outcome: B.A. in Philosophy (Hons & non-Hons)**

The objectives of this course are to acquaint the students with:

1. The basic problems of epistemology and metaphysics in Classical Indian Philosophy
2. Logical reasoning and testing of them in Aristotelian and Modern Symbolic Logic
3. Basic ideas of philosophy concerning theories and categories of knowledge and truth
4. The problems of epistemology and metaphysics of Greek Philosophy.
5. The development of critical understanding of Indian Logic.
6. The basic ideas of Aristotelian and Symbolic logic.
7. The problems of Modern Western Philosophy
8. The basic ethical concepts of Indian Philosophy and develop critical thinking.
9. Different ethical concepts of Western Philosophy and to develop critical understanding

**Course outcome:**

On successful completion of this course a student will be able to:

1. Know about The Upanisads, Carvaka, Budhism, Jainism, Samkhya, Asatkāryavāda and Satkāryavāda , Advaita Vedānta of Sankara and Viśiṣṭādvaita of Rāmānuja.
2. Get acquainted with Nature of Logic, Nature of Argument, Truth and Validity, Square of Opposition. Mediate Inference, Categorical Syllogism, Figure and Mood, Aristotelian and Modern Symbolic Logic
3. Relation between Philosophy and Science, Theories of the Origin of knowledge, Realism, Idealism, Categories of Knowledge and Theories of Truth
4. Get acquainted with the philosophies of great philosophers, to name a few, Socratic, Thales, Pythagoras, Democritus, Heraclitus and Socrates
5. Learn about Nature and development of Indian Logic
6. Learn about Proposition, Inference: Deductive and Inductive, Symbols and Its Usage, Basic Truth Function
7. Get acquainted with the philosophy of great modern philosophers, Viz., Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant and Hegel.
8. Learn about Ethics of Vedas, Upanisads and Bhagawat Gitā
9. Learn about Western concepts of ethic and morality

**Programme Specific Outcome: B.A. in Geography (Hons & non-Hons)**

The objectives of this course are to acquaint the students with:

1. The various processes responsible for the development of diverse landforms on the earth surface
2. Understand the various morphometric techniques used in drainage analysis.
3. Aware of the composition of atmosphere and various climatic processes.
4. Gain knowledge of the various weather symbols and to prepare graphs based on climatic data.
5. Introduce the major themes of human geography and its importance in present days.
6. Familiar with the various aspects of diversities of India.
7. Aware of the various application of thematic mapping and shape index analysis.
8. About the history of map projection and uses of different types of map projection.
9. Climate, soil and topography in different continents of the world
10. The basic ideas of primary, secondary and tertiary activities and its spatio-temporal pattern.
11. Conceptual and theoretical ideas of environment as well as relationship between man and environment in different geo climatic regions
12. The basic ideas of population size, composition, growth and distribution along with its determinants
13. Some practical knowledge and skills in diversified applications of remote sensing data and technology

**Course outcome:**

On successful completion of this course a student will be able to :

1. Learn how the natural surrounding and human activities are responsible for the distribution of plants and animals.
2. The various slope analysis techniques and uses of different types of scale.
3. Learn about various factors responsible for the climatic disturbances.
4. Find out the variability in the distribution of rainfall and the factors responsible for such variation in the pattern of rainfall

5. Learn about population growth and factors responsible for uneven distribution of population in the world. The student will also gain knowledge about the population resource relationship and various types of settlement pattern
6. Learn about the physical, anthropogenic and economic diversity of India and the factors responsible for such diversities.
7. Know about the various surveying methods and the instrument used in it.
8. Get familiarized with industrialization and population distribution in developed, developing and underdeveloped nations of the world.
9. Acquire the knowledge of some economic development models in relation to agriculture and industry.
10. Attain the nature and intensity of some burning environmental issues at local, regional and global level along with mitigation programs and policies.
11. Incorporate contemporary issues of population
12. Enhance the technical skills in the field of processing and analysis of both spatial and non-spatial data in GIS Software acquired from GPS, Remote sensing and land base surveys and its utilities in various fields.

## **Programme : Bachelor of Science (B.Sc.)**

### **Program Outcomes:**

A student, after successfully completing this three year programme would be able to:-

1. Acquire knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Botany, Zoology, Mathematics, etc.
2. Understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life.
3. Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments
4. Acquire the skills of observations, analysis and drawing logical inferences from the scientific experiments.
5. Think creatively to propose novel ideas in explaining facts and figures or providing new solution to the problems.
6. Realize how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.
7. Developed scientific outlook not only with respect to science subjects but also in other faculties such as humanities, performing arts, social sciences etc. and can greatly and effectively influence in evolving new scientific theories and inventions.
8. Realized that pursuit of knowledge is a lifelong activity and that combination of untiring efforts, positive attitude and other necessary qualities leads towards a successful life.

After graduation one may further -

- i) Opt for higher studies
- ii) Attempt successfully different competitive examinations for job
- iii) Choose, with confidence, any avenue of self-employment.

**Programme Specific Outcome and Course Outcome:**

**Programme Specific Outcome: B.Sc. in Phy (Hons)**

**Course Objectives:**

The objectives of this course are to acquaint the students with:

1. The knowledge and understanding of these mathematical methods to solve problems in a number of elementary branches of Physics like mechanics, electromagnetic theory, statistical Physics, thermal Physics etc.
2. Computer programming and numerical analysis and know its role in solving problems in Physics.
3. The basic concepts and ideas in mechanics.
4. The planetary motions as central force problem.
5. The peculiar phenomena of special relativity which are not seen in Newtonian relativity and to understand the concept of space-time.
6. The basics of wave motion and the behavior of light due to its wave nature.
7. Analysis of some of the fundamental laws and principles of light which is used in many important optical instruments
8. The knowledge and understanding of mathematical methods to solve problems in a number of fundamental topics in Physics.
9. Problems in varied fields of Physics, Chemistry and Biology based on principles of Thermal Physics
10. The basic digital electronics concepts and devices.
11. The concepts of Modern Physics to deduce the structure of atoms, explain the wave-particle duality of the photon and analyze the structure of matter.

12. The basics of semiconductor PN junction, its various types and its application to different electronic circuits
13. The development of modern Physics and the theoretical formulation of quantum mechanics.
14. Application of Maxwell's equations to explain the properties of the electromagnetic wave and its interaction with matter.
15. The basic concepts of Statistical Mechanics so that students will be able to cope-up with higher level of such course in future.

**Expected Learner Outcomes:** A student, after successfully completing this three year programme would be able to:-

1. Understand more advanced topics in Physics by providing a solid grip over the fundamental concepts in Physics.
2. Develop knowledge of mechanics which will help students in their everyday life.
3. Develop knowledge of special relativity to understand relativistic formulation of modern theories.
4. Understand the effect of electric field on magnetic field and the effect of magnetic field on current. AND the basic principle of the electrical circuit (AC) and electrical networking.
5. Develop the basic theoretical knowledge and experimental skills of the students on electrical networking
6. Train the students to handle and repair instruments based on electric and magnetic field effects
7. Get acquainted with use different optical instruments.
8. Understand various natural phenomena using different apparatus in the laboratory
9. Construct a Physics problem computationally and then solve it by applying mathematical methods.

10. Use the knowledge of thermodynamics in various applications in allied fields like Materials science, Condensed matter Physics, Atmospheric Physics, Solar Physics, etc.
11. Apply the knowledge of electronics to analyze and apply digital circuits in solving circuit level problems.
12. Develop the ability to apply the concepts of modern physics in solving simple problems in Quantum Mechanics (QM), structure of atoms, Laser, and Nuclear Physics.
13. Develop basic knowledge of operational amplifier and its applications
14. Learn how to apply quantum mechanics to solve physical systems in different areas of science.
15. Use Maxwell's equations to describe the behaviour of electromagnetic waves in vacuum as well as medium.

**Programme Specific Outcome: B.Sc. in Chemistry (Hons)**

**Course Objectives:**

The objectives of this course are to acquaint the students with:

1. The basic knowledge of chemistry in relation to atomic structure, bonding, periodicity etc.
2. Different states of matter & their mechanical treatment.
3. Preliminary knowledge in basic organic chemistry, Hydrocarbons, stereochemistry & conformational analysis.
4. Chemical thermodynamics, their mathematical expression & application.
5. The chemistry of s, p block elements, noble gases, inorganic polymers & metallurgy.
6. Preliminary knowledge on the synthesis, properties of organic compounds of Halogen & oxygen containing Functional groups.
7. The details on phase equilibria, chemical kinetics, catalysis and surface chemistry.
8. A vivid knowledge on coordination chemistry and its application extended to biological system.
9. The knowledge on the preparation and properties of different classes nitrogen containing compounds.

10. Basic knowledge on electrochemistry, various laws governing electro chemical process and their application.
11. Knowledge in organic synthesis, retro synthesis, and to understand biochemistry.
12. Familiar with the various aspects of photo chemistry and quantum chemistry.
13. Various aspects of knowledge on organometallic chemistry, its application and Inorganic Reaction Mechanism.
14. Application of Spectroscopy (UV – visible, IR and NMR), carbohydrates, dyes and polymers.

**Expected Learner Outcomes:** A student, after successfully completing this three year programme would acquire knowledge of:-

1. Properties of elements, atomic radii, ionic radii, size effect of ionic bond, salivation energy, covalent character of ionic bond, redox equations, principle involved in volumetric analysis etc.
2. Kinetic molecular model of a gas, behaviour of real gases, effect of addition of various solute on surface tension and viscosity. Cleansing, action of detergents, etc.
3. Knowledge of elimination reaction, electrophilic and nucleophilic addition, Relative stability of cyclic hydrocarbon, Bayer's strain theory etc.
4. Application of mathematical tools to calculate thermodynamic properties
5. Real world applications, shapes of noble gas. Study of compounds with emphasis on structure, bonding, preparation and properties.
6. Alcohols, phenols, carbonyl compounds, acids and their derivatives etc
7. Phases, phase diagrams for systems of solid- liquid equilibria involving eutectic, congruent and incongruent mp, solid solution etc
8. Quantitative aspect of ligand field and MO theory, stability of various oxidation states and emf of transition elements
9. Reaction and mechanism of substitution in heterocyclic compounds.
10. Application of conductance measurement, electrical and magnetic properties of atoms and molecules

11. How to interpret spectra and role of photochemical reaction in biochemical processes
12. Use of Wilkinson's catalyst in industrial process of hydrozeneration of alkene, gas synthesis by metal carbonyl
13. Application of UV, IR, NMR spectroscopy, mass spectra in organic molecules

**Programme Specific Outcome: B.Sc. in Mathematics (Hons)**

**Course Objectives:**

The objectives of this course are to acquaint the students with:

1. Differential and Integral Calculus, the properties of the number system,
2. Differential Equations: Partial Differential equations and System of Ordinary differential equations and techniques to solve differential equations
3. Theory of Real Function, limit, continuity and differentiability of real valued functions
4. Group theory, Ring theory and Linear Algebra
5. Riemann Integration and Series of Functions
6. Numerical Analysis
7. Multivariate Calculus
8. Metric Spaces and Complex Analysis

**Expected Learner Outcomes:**

After completing the

Programme the students will be able to-

1. Apply Mathematics as a tool to solve problems of other disciplines *viz.*, Science and Technology, Commerce and Management, Humanities, Soft-computing *etc.*
2. Pursue higher studies in the subject to take part in the academic upliftment of the subject.
3. Develop new techniques/methods for solving the unsolved problems of the other disciplines.
4. Construct Mathematical models to mimic real life problems and make their predictions, estimations, and regression.

5. Apply Calculus in real life problems.
6. Formulate mathematical models
7. Identify the properties of the number system.
8. Describe various analytical properties of the real number system.
9. Expand functions in series and different form of remainders
10. Identify the group structures present in different branches of sciences.
11. Make mathematical formulations and their solutions of various physical problems;
12. Design mathematical models used in heat, wave.
13. Describe the Laplace equation and their solutions.
14. Discuss various numerical methods and interpolation formulae
15. Apply numerical techniques for solving differential equation.
16. Transformations and corresponding matrices.

**Programme Specific Outcome: B.Sc. in Botany (Hons)**

**Course Objectives:**

The objective of this course is to expose the students on

1. Various forms of microbes and algae - their characteristics and economic importance. molecular organisations life and also discusses cellular and molecular processes of life.
2. The fungal world, different fungal diseases; their economic importances etc
3. Bryophyte, Gymnosperms and Fossil Plants
4. The structural and anatomical organisations of plant tissues and their development
5. Various economically important plants and plant products
6. The principles of heredity and different mechanisms of inheritance

7. Biological Macromolecules and various processes involved with these macromolecules
8. Interaction of plant with its surroundings and also the geographic distribution of different plants
9. Identification, classification and nomenclature of higher plants
10. The process and mechanisms of plant reproduction
11. Different physiological processes in plant life
12. Various metabolic processes involved with plant life
13. Application of modern tools and techniques in Biology

**Course Outcome:**

After successful completion of this course students will be able to

1. Critically evaluate ideas and arguments by collection of relevant information about the plants, so as to recognize the position of plant in the broad classification and phylogenetic level.
2. Identify problems and independently propose solutions using creative approaches acquired through interdisciplinary experiences, and a depth and breadth of knowledge/expertise in the field of Plant Identification.
3. Accurate interpretation of collected information and use taxonomical information to evaluate and formulate a position of plant in taxonomy.
4. Apply the scientific method to questions in botany by formulating testable hypotheses, collecting data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses.
5. To present scientific hypotheses and data both orally and in writing in the formats that is used by practicing scientists.
6. To access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.

7. To apply fundamental mathematical tools (statistics, calculus) and physical principles (physics, chemistry) to the analysis of relevant biological situations.
8. To identify the major groups of organisms with an emphasis on plants and be able to classify them within a phylogenetic framework. Students will be able to compare and contrast the characteristics of plants, algae, and fungi that differentiate them from each other and from other forms of life.
9. To use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth. They will be able to use specific examples to explicate how descent with modification has shaped plant morphology, physiology, and life history.

**Programme Specific Outcome: B.Sc. in Zoology (Hons)**

**Course Objectives:**

The objective of this course is to expose/provide the students to/with various forms of protozoa and worms; their classification and structural anatomy.

1. Fundamentals of ecology and impacts of ecological factors on living organisms.
2. Various forms of coelomates, their classification and structural anatomy
3. Various forms of chordates, their classification and structural anatomy.
4. Provide a foundation for understanding the complexities of the coordination system of animal body.
5. Biomolecules of living organisms, their interactions for perpetuation of life.
6. Structure and function of a cell as the fundamental unit of life.

### **Course Outcome:**

After successful completion of this course students will be able to

1. Learn about the diversity in animal groups (invertebrates), cell biology and Ecology .
2. To inculcate good laboratory practices in students and to train them about proper handling of lab instruments.
3. Learn about the diversity in animal groups (vertebrates), and applied zoology.
4. The practical course intends to inform students about Animal systematic, animal diversity and applied zoology field such as Fisheries, Apiculture, Sericulture etc.
5. Have detailed studies of the various disciplines of the zoology subject and the other branches of zoology such as Genetics, Animal physiology, Molecular biology, Biochemistry, Microtechnique, Nonchordate and Chordate, Developmental Biology, Histology, cell biology, Biodiversity, Medical entomology, parasitology, Genetics etc.
6. Learn about the working principles, design guidelines and experimental skills associated with different fields of zoology such as genetics and cell biology, Entomology, physiology, Developmental biology, histology, biochemical techniques etc.

### **Programme Specific Outcome: B.Sc. in Statistics (Hons)**

#### **Course Objectives:**

The objective of this course is to expose the students on

1. Different measures of Central Tendency & Dispersion, Correlation and Regression in bivariate data
2. The knowledge of Differential & Integral Calculus, Differential Equations, Algebra of Matrices and Determinants
3. The Theory of Probability, Random Variable (discrete & continuous) and Mathematical Expectation
4. Different Theoretical Probability Distributions (discrete & continuous)

5. Test of Significance and different Large Sample Tests
6. Exact sampling distributions and tests of significance based on exact sampling distributions
7. Complete Enumeration Vs Sample Survey, various sampling techniques used in sample survey and Indian Official Statistics
8. Real Analysis, infinite series, positive termed series and their convergence, various tests of convergence, finite differences, interpolation and numerical integration
9. Theory of Estimation, Testing of Hypothesis and Sequential Analysis
10. Theory of Linear Estimation, Regression Analysis and Analysis of Variance,.
11. Statistical Process Control, various  $3\sigma$ -control charts and analysis of patterns on control charts, Single and Double Acceptance Sampling Plans and their OC, AOQ, LTPD etc.
12. Stochastic Process: Stationary Process, Markov Chains, Poisson Process and Queuing system
13. Statistical Computing by using C Programming

**Course Outcome:**

After successful completion of this course students will be able to

1. Use various statistical measures in a logical way for analysis and interpretation of field data related to different branches of social science
2. Construct various types of price and quantity index numbers, consumer price index number; calculate real wage, money wage and dearness allowance.
3. Know how to fit an observed frequency distribution to a theoretical frequency distribution, e.g., Binomial, Poisson, Normal etc.

4. Design a sample survey, make judicious choice of sampling technique, use Random Number Table to draw random sample from the population, find estimates of unknown population parameters.
5. Use various interpolation formulae to estimate missing observation and apply various rules of numerical integration to find value of a definite integral whose integrand is not known.
6. Find test statistics to test null hypotheses ( simple or composite ) against an alternative hypothesis ( simple or composite ) by using Neyman-Pearson Lemma, Likelihood Ratio Method and Sequential Probability Ratio Test.
7. Construct various control charts and interpret patterns in control charts to find whether a manufacturing process is in control or not. Apply single and double sampling plans to take decisions on Outgoing lots of finished products.
8. Designs and analyse comparative experiments and draw valid inferences in the fields of agriculture and industry.
9. Apply Discriminant Analysis, Principal Components Analysis and Factor Analysis in case of multivariate data. Apply Non-parametric tests in distribution free data.

**Programme : Bachelor of Commerce (B.Com.)**

**Program Outcomes:**

A student, after successfully completing this three year programme would be able to:-

1. Build a foundation to face the challenges in the field of business and commerce

2. Establish themselves as successful professionals in the fields of Manufacturing Companies, Banking Sector, Insurance Companies, Financing Companies etc,
3. Acquire skills of utilizing the concepts of accounting and management in different sectors of business and commerce
4. Acquire the ability to face the challenges in the field of Commerce and business if one chooses self employment as ones livelihood.
5. Opt for higher studies

**Programme Specific Outcome: B.Com. (Hons.): (CBCS)**

**Course Objectives:**

The objective of this course is to

1. Help students to acquire conceptual knowledge of the financial accounting:  
The objective of
2. Impart basic knowledge of the important business legislation along with relevant case law. Acquaint the students with the concepts of microeconomics dealing with consumer behavior..
3. Help the students to acquire the conceptual knowledge of the corporate accounting and to learn the techniques of preparing the financial statements.
4. To impart basic knowledge of the provisions of the Companies Act 2013 and the depositories Act, 1996.
5. Providing the student with knowledge of basic concepts of the macro economics.

**Course Outcome:**

After successful completion of this course students will be able to

1. Impart skills of Financial Accounting for recording various kinds of business

transactions.

2. Understand the supply side of the market through the production and cost behavior of firms
3. Discuss case studies involving issues in corporate laws
4. Get acquainted with the modern tools of macro-economic analysis and the policy framework including the open economy.
5. Acquire skills in reading, writing, comprehension and communication, as also to use information technology for business communication.