GOVERNMENT EKLAVYA COLLEGE DONDILOHARA

Dalli Rajhara Road, Dondilohara District: Balod, Chhattisgarh

AISHE Code: C-21706

Program Outcome (PO) & Course Outcome (CO)

Revised in 2023-24

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Affiliated to: Hemchand Yadav University, Durg, Chhattisgarh, India

B.A./B.Com./B.Sc.

Programme Outcomes (POs)

At the end of the completion students are able to attain the following attributes:

- **Critical thinking**: The B.A. graduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking.

- **Effective communication:** Foundation course in the undergraduate programme includes two languages; First Hindi language and second English language, which aims the development of communication skills. The students will be able to communicate effectively with people. They will be able to express ideas through pen and paper as well.

- **Social interaction**: The students acquire knowledge in the field of social science, literature and humanities which make them sensitive and sensible enough to interact effectively with the society.

- **Responsible citizen:** Programme provides the base to be a responsible citizen.

- **Environment and Sustainability:** The undergraduate courses incorporate Environmental studies as a subject which imparts studies related to environmental issues and sustainability in which the students are given projects pertaining to the environmental concerns. It leads students to understand the issues of environmental contexts and sustainable development.

- **Higher studies**: The programme empowers the graduate to appear for various competitive exams or choose the postgraduate programme for higher studies.

- **Self directed and life-long learning**: Students acquire various traits on completion of the course and program and develop the ability to learn by their own, consequently life-long learning process is part of the personality.

Master of Arts (M.A.)

Programme Outcomes (POs)

At the end of the completion of Postgraduate Programme, students are able to attain the following attributes

- **Disciplinary knowledge**: The enhanced domain knowledge during the entire programme leads to profound expertise in discipline and increase confidence to take up new challenges in discipline as per demand.
- **Research aptitude**: abilities to investigate, innovate, use intellect to target problems and needs of societal welfare are the integral part of research, which is imbibed in students during their learning process.
- **Effective citizenship**: The students develop sense of responsibilities as good citizens, build-up contributory approach to national development in small steps by remaining sensible to cultural-regional variations and respect of ideas.
- **Leadership qualities**: The students as part of post graduate programmes develop leadership qualities; develop capabilities of working as a team to achieve goals.
- **Ethical awareness**: Professional ethics are expected from the individuals for serving any work place, which students learn from their learning environment.
- **Self-directed learning and lifelong learning**: The challenges posed during programme as question based learning enable them to work independently, identify appropriate resources required for problem solving, managing projects. Fast learning through ICT tools, integrates self-directed learning, digital learning with life-long learning.

Course Outcomes

1. **Foundation Course: Hindi Language (For B.A/B.Sc./B.Com Part I)**

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2. **Foundation Course: Hindi Language (For B.A/B.Sc./B.Com Part II)**
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3. **Foundation Course: Hindi Language (For B.A/B.Sc./B.Com Part III)**
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English Language

4. **Foundation Course: English Language (For B.A/B.Sc./B.Com Part I, II & III)**

- Learning Parts of Speech, structure and types of sentence.
- Increasing vocabulary.
- Increasing the comprehension of English as a language.
- Learning to read and to write various contents and genre like poetry, short story, essay etc.
- Learning to write formal and informal letters.
- Learning about Human Values, Professional Ethics, Gender Issues and Environmental Concerns through the texts of renowned authors.
- Equipping with the grammatical knowledge of the English language.
- Programme will make the students able to pursue Higher Education opting English as a subject.
- Developing communication skill and confidence in English language.

Department of History

1. B.A. Part I

- Describe Prehistory and Proto-history.
- Classify urbanization in the genetic basis.
- Identify early maps.
- Students will develop a comprehensive understanding of the theories and practice of languages.

2. B.A. Part II

- Understanding of Delhi Sultanate.
- Analyze Mughal rule administration's art and architecture.
- Identify and analyze cultural synthesis.

3. **B.A. Part III**

- Evaluate consolidation of English power in India.
- Analyze social, religious consciousness in India.
- Comparison of nationalist movements- Pre-Gandhian and post-Gandhian era.
- Identify modern maps: Sites of mutiny of 1857, princely states in 1858, major sites of national congress session, and major sites in civil disobedience movements.

4. M.A. (Master of Arts: I-IV Semester)

- History paves way to different government jobs as questions from history are asked frequently in competitive exams.
- Students will gather knowledge about history and heritage.
- They will be able to pursue Higher education in history.
- Students can get job in museum archives and libraries.
- They may proceed for research in history and archeology.

Department of Economics

1. B.A. Part I

- Students will understand key economic concepts like scarcity, opportunity cost and how individuals and firms make decision to use resource efficiently.
- Students will learn how consumers make choices to make satisfaction, and how firms decide on production, pricing and paying factors like labor and capital.
- Students will understand how market prices are determined by supply and demand, how production decisions are made and how economic policies can impact social welfare and efficiency.
- Students will develop a comprehensive understanding of the theories and practice of languages.
- After completing the course, students will understand India's economic planning, including the goals and strategies of the Five-Year Plans and the role of government in development.
- Students will learn about India's demographic structure, including population growth and its impact on economic development, employment, and education.
- Students will gain insights into the agricultural sector of India, its challenges, opportunities, government policies, and the impact of technology on productivity.

- Students will explore India's foreign trade policies, trade relations, and the impact of globalization, as well as the economy of Chhattisgarh, focusing on agriculture, industry, and government policies.

2. B.A. Part II

- Students will understand the meaning and functions of money, key theories like the Quantity Theory of Money, and the causes and effects of inflation, deflation, and reflation on different sectors of the economy.
- Students will learn about the role and functions of commercial banks, the process of credit creation, and the evolution of banking in India, along with the tools of monetary policy used by the Reserve Bank of India.
- Students will explore the concept of public finance, the distinction between public and private finance, the role of government in economic activities, and the principles guiding public expenditure.
- Students will gain insights into the sources of public revenue, taxation principles, the impact of taxes, and the major trends in tax revenue for both the central and state governments in India.
- Students will understand public debt, its effects on the economy, methods of debt redemption, and the process of preparing and passing the public budget in India, including economic and functional classifications of the budget.
- Students will be able to define and explain key macroeconomic concepts such as national income, economic welfare, social accounting, and the circular flow of income, along with understanding national income accounting methods.
- Students will understand and compare classical and Keynesian theories of employment, analyzing their relevance to contemporary economic conditions.
- Students will gain the ability to analyze the consumption function, investment multiplier, and the relationship between saving and investment, assessing their role in economic equilibrium.
- Students will develop an understanding of trade cycles and theories, and critically assess policies to control economic fluctuations.
- Students will be able to explain the theories of international trade, evaluate trade policies, and analyze balance of payments, understanding their impact on economic development and trade imbalances.
- Students will acquire the skills to apply macroeconomic theories to real-world issues, assess macroeconomic policies, and communicate complex economic concepts effectively through research and analysis.

3. B.A. Part III

- Students will learn how factors like labor, capital, and technology affect economic growth and the differences between developed and underdeveloped economies. They will also understand different types of poverty and key economic growth models.
- Students will understand how population growth impacts economic development and explore theories on economic growth, such as how innovation drives growth and ideas for overcoming poverty traps.
- Students will learn about various economic growth models, including the Harrod-Domar model and Solow's model, and how to apply them to real-world situations.
- Students will understand how environmental problems like pollution affect economies and how policies can protect the environment. They will also learn about sustainability indicators and ways to measure environmental damage.
- Students will explore how factors like food security, education, and health contribute to economic development, as well as the role of agriculture, new technologies, and globalization in growth. They will also study the importance of land reforms in improving agricultural productivity.
- Understand basic statistical concepts, including the importance of statistics and how to collect and

categorize data.

- Be able to calculate and interpret averages (mean, median, mode) and understand how data is skewed.
- Know how to measure and explain the spread of data using methods like range, quartile deviation, mean deviation, and standard deviation.
- Be able to analyze relationships between two sets of data using correlation methods and assess the reliability of results.
- Be able to create index numbers and analyze time series data to identify trends and patterns for forecasting and economic analysis.

4. M.A. (Master of Arts)

First Year

- After completing the course, students will have a strong understanding of foundational economic principles, including consumer and producer behavior, market functioning, and national income determination.
- They will be able to analyze key macroeconomic concepts, including classical and Keynesian theories, and understand the functioning of closed and open economies.
- Students will possess advanced mathematical and statistical skills to analyze economic data and solve real-world economic problems.
- They will understand industrial economics, focusing on market competition, pricing strategies, and industrial policies.
- Students will have in-depth knowledge of the Indian economy, including its structural transformation, with a focus on agriculture, industrialization, poverty, and inequality.
- They will be proficient in labor economics, understanding wage theories, employment trends, and the impact of labor policies on economic outcomes.
- Students will have developed strong research skills, enabling them to design projects, collect data, and conduct quantitative analysis.

Second Year

- By the end of the course, students will have specialized knowledge of environmental economics, including the impact of economic activities on sustainability and the use of policies to address environmental challenges.
- They will have a deep understanding of public finance, including taxation, public expenditure, fiscal policies, and their role in economic stability and growth.
- Students will be able to analyze international trade theories, exchange rate systems, and the role of global institutions like the WTO and IMF, along with understanding the impact of globalization.
- They will understand demographic trends, including fertility, mortality, and migration, and their economic implications.
- Students will be able to evaluate the role of social sectors such as health, education, and welfare programs in human development and economic progress.
- They will have a thorough understanding of theories of economic growth and development, with the ability to analyze challenges like poverty, inequality, and institutional roles in sustainable development.
- Students will have advanced research and presentation skills, enabling them to conduct empirical studies, analyze data, and effectively present their findings, preparing them for academic and professional careers.

Department of Political Science

1. B.A. Part I, II & III

Students completing the requirements for a B.A. degree in Political Science will be able to:

- participate as a civically engaged member of society;
- Analyze political and policy problems and formulate policy options;
- Use electronic and traditional library resources to research key local, state, national and international policy issues and present results;
- Demonstrate competency with basic tools underlying modern social science research including competency in statistics and qualitative analysis
- Demonstrate critical thinking, including the ability to form an argument, detect fallacies, and martial evidence, about key issues of public policy and politics;
- Discuss the major theories and concepts of political science and its subfields; and
- Deliver thoughtful and well articulated presentations of research findings.
- Discuss the theory and apply the methodology of comparative analysis within the discipline of political science.
- Distinguish systematic normative inquiry from other kinds of inquiry within the discipline of political science.
- Explain the central concepts in modern Western political thought.

2. M.A. (Master of Arts)

- Students can evaluate political theories, western and Indian political thoughts.
- Students can understand the concept of social change, equality and justice and constitutional process.
- Explain functioning of government institutions, including local politics of Chhattisgarh.
- Students can conduct research adopting experimental and quasi experimental research.
- Students can explain nature, evolution and functioning of international organization like UNO, international court of Justice, Disarmaments etc.
- Students can compare Indian and foreign politics.
- Critically evaluate and analyze international problems of Syria, Arab and Israel, problems of Congo, Hind and China.
- Students understand international laws, treaties, piracy and Indian Foreign policies.
- Students can understand about Democracy in India and politics of Chhattisgarh.

Department of Hindi

1. B.A. Part I

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2. B.A. Part II

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3. B.A. Part III

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Geography

1. B.A. Part I

- Students will be introduced to the knowledge in physical geography.
- They will acquire the knowledge of formation of land and ocean.
- Students will understand the theories in physical and human geography to develop their view about the formation of different geographical features like -mountains, valley, settlement, transport, trench etc.
- Students will get acquainted with the endogenetic and exogenetic process.
- Students will be familiar with the applied geomorphology, climatology, Agriculture, Industries etc.

2. B.A. Part II

- Students will get acquainted with physical as well as human geography of India.
- Enable the students' knowledge of river system of India.
- Increase knowledge in the natural resources of India and world with help of map.
- Students got aware of the magnitude of problems and prospectus at National level.
- Students will understand the interrelationship between the subject and the society.

3. B.A. Part III

- The course will help develop the basic knowledge of remote sensing and its applications.
- Gain knowledge on GIS and its applications.
- Develop knowledge of map making and cartography.
- Understand digitization and data editing.
- Understand different types of sensors.
- Acquire knowledge of Chhattisgarh.
- Understand various data structures.

4. Practical (B.A. Part I,II,III)

- Develop in idea about scale and draw different types of scale like linear, diagonal and vernier.
- Acquire knowledge different types of map projection.
- Gain knowledge about topographical maps and apply this knowledge in ground surface.

- Learn the use of various minor instruments like rotameter, planimeter and pantograph.
- Brings direct interaction of different types of surveying instruments like prismatic compass, plane table with environment.
- Students learn to use of various meteorological instruments and also learn to interpret of the Indian daily weather report.
- That's help students to predict the weather report in future.
- They understand and gain knowledge about statistical techniques.
- Students learn to use pocket stereoscope and interpret the aerial photograph with the help of pocket stereoscope. Also develop their skill in remote sensing and G.I.S.
- Students learn to draw many cartography diagram and apply this in different statistical data.
- They can able to select the appropriate technique for presentation of a data to their field work.
- Their knowledge about primary and secondary data collection helps them to prepare their survey report.

Commerce

1. B.Com Part I

S.No.	Name of the course	Outcomes
1	**Financial Accounting**	• To enable the students to learn principles and concepts of Accountancy. • Students are enabled with the knowledge in the practical applications of accounting. • To find out the technical expertise in maintaining the books of accounts. • To encourage the students about maintaining the books of accounts for further reference.
2	**Business mathematics**	• Introduces mathematics to undergraduate students of commerce & industries to solve the real life problems. • Prepares students to develop skills to solve financial problems.
3	**Business communication**	• To make the students aware about the business communication. • Corporate communication helps future managers and employees in performing managerial functions smoothly.
4	**Business regulatory framework**	• Provides an overview of the basic concepts relating to industrial law. • Provides knowledge of partnership act and consumer protection act 1986.
5	**Business Economics**	• Creates awareness among students about various economic conditions of macro- economics such as inflation, unemployment etc. • Updates students about the open economy with International trade.

6	**Business Environment**	• To make the students aware about the Business and Business Environment.

2. B.Com Part II

1	**Corporate Accounting**	• Students skills about accounting standards will be developed. • To make aware the students about the valuation of shares.
2	**Company law**	• Creates understanding of various standards, maintaining order, solving disputes and other rights. • Acts as a guide post for minimally accepted behavior in the society.
3	**Cost Accounting**	• Impacts the knowledge of various costs on the basis of element behavior and functions. • Helps in ascertaining the cost of material and labour.
4	**Principles of Bus. Management**	• Prepares the students with better managerial abilities and development of managerial skills. • Provide detail knowledge about the management process and various functions of management.
5	**Business Statistics**	• To provide practical exposure on calculation of measures of average. • To introduce the students about the concept of provability.
6	**Fundamental of Entrepreneurship**	• Enhances the entrepreneurial abilities of the students and develops creativity for better Functioning of the organization. • Familiarizes students with business planning in different types of entrepreneurs and the evolving concepts of entrepreneurial ship.

3. B.Com Part III

1	**Income Tax**	• Helps students to know various Tax procedure. • update student with current Taxation policies.
2	**Auditing**	• Creates understanding of the need & benefits of having audit of financial statements. • Analyses an organization's operations and maintenance of systems of internal controls that can help detect and prevent various forms of fraud and other accounting irregularities.
3	**Indirect Taxes with GST**	• Enables learners to acquire the knowledge of Goods and services. • Explores the process of Registration, place and value of supply and computation of tax liability.

4	**Management Accounting**	• Help the give proper idea on financial statement analysis in practical point of view. • To provide knowledge about budget control keeping in mind the scope of the concept.
5	**Principles of marketing**	• To study and critically analyze the basic concepts and trends in marketing. • To aware of the recent changes in the field of marketing.
6	**International Marketing**	• This course enables the students, the practical knowledge and the tactics in the International marketing. • Provides Information regarding product planning and pricing decisions for export marketing.

Microbiology

B.Sc. Part I, II & III

S.No.	COURSE	OUTCOME
1	**B.Sc. Part I** **General Microbiology And Basic techniques**	Students will be able to understand the contribution various scientist in microbiology and scopes of various branches of microbiology. Understands various microbial techniques (culture, Staining, Serial dilution, isolation technique).
	Basic microbial techniques	Understand various steps of cell divisions of microbes and Microbial physiology, Genetics of microbes.
2	**B.Sc. Part II** **Molecular Biology genetic engineering and microscopy, centrifugal technique**	Students will be able to Define various steps of genetic engineering. Identify different parts of microscope and they will be able to know about microscopic study in various department.
3	**B.Sc. Part III** **Molecular biology and genetic engineering Environment and medical microbiology**	Students will be able to To study the microorganism found in environment To gain knowledge of the relationship between the human body and microorganism They will be able to know the different diseases caused by microorganism

Mathematics

B.Sc. Part I:

- Learn to solve system of linear equation.
- Learn to solve system of elementary matrices relation and

- Mapping solve to liner equation.
- Learn to solve system of change of variables, Tracing of conins and solve of cylinder equation.
- Gail knowledge of fundamental concepts of real number and introduction to sequence and series.

B.Sc. Part II:

- Verify the value of the limit of a function at a point using the definition of the limit.
- Student will be to understand differentiation and fundamental theorem in differentiation.
- Introduction to ordinary differential equation and solve dif. Equation problems.
- Student will be to understand mechanics like harmonic oscillations kinetic energy.

B.Sc. Part III:

- Finding extreme values of function and introduction to complex analysis.
- Learn to find roots of polynomial over rational roots.
- Introduction to complex analysis solve linear equation.
- Acquire good knowledge and understanding in advanced analysis of vector geometry and algebra problem.

Physics

B.Sc. Part I:

- Understand the motion of objects in different frame of references.
- Understand laws of motion, reference frames, and its applications i.e. projectile motion, simple harmonic oscillator, Rocket motion, elastic and inelastic collisions.
- Understand the idea of conservation of angular momentum, central forces and the effective potential.
- Understand the application of central force to the stability of circular orbits, Kepler's laws of planetary motion, Orbital Precession and Rutherford scattering.
- Understand the dynamics of rotating objects i.e. rigid bodies, angular velocity, the moment of inertia, parallel axis theorem, the inertia tensor, the motion of rigid bodies. non-inertial frames: pseudo forces, examples involving the centrifugal force and Coriolis force.
- Understand the basics of material properties like, elasticity, elastic constants and their relation, torsion of a cylinder, bending of a beam, cantilever, beam supported at its ends and loaded in the middle.
- Understand the basics of motion of fluid which includes streamlined and turbulent flows, equation of continuity, critical velocity, flow of a liquid through a capillary tube, capillaries in series and parallel, Stokes' formula.
- Learn and understand calculus. Starting with review of differentiation, exponential and logarithm functions, trigonometric functions, plotting functions, differentials and basics of integration.
- Understand Gaussian integrals, integration by parts, differential and integral calculus for many variables, Lagrange multipliers and Jacobins, Taylor series and their applications in physics.
- Understand math of complex number and application of Cauchy- Riemann Equations, Residue Theorem and Taylor Series for analytic functions.
- Understand basics of vector calculus.
- Understand divergence, gradient and curl and their physical interpretation.
- Understand divergence theorem, Green's theorem, Stokes' theorem and appreciate its applications.
- Understand basics of matrices and determinants i.e. inverses, linear vector spaces, basis, basis transformations and linear operators, determinants, eigenvalues, eigenvectors, simple applications, and basics of tensors.

Lab Work

- A working knowledge of fundamental physics and basic mechanics principles.

- The ability to identify, formulates, and solve physics problems.
- The ability to formulate, conduct, analyzes and interprets experiments in physics.
- The ability to use modern physics techniques and tools, including mathematical techniques, graphs and laboratory instrumentation.

B.Sc. Part II

- Understand the concepts of mechanics, acoustics and the properties of matter.
- Ability to recognize and use a mathematical oscillator equation and wave equation, and derive these equations for certain systems, point out the limitations and be able to refer to very different solutions of identical oscillator equations due to different initial and boundary conditions.
- Understand how several waves or parts of waves interact, and be able to calculate and analyze diffraction and interference phenomena, and explain the conditions required for such phenomena to appear.
- Able to calculate what happens when waves move from one medium to another, and be able to explain dispersion and group and phase velocity.
- Use Lissajous figures to understand simple harmonic vibrations of same frequency and different frequencies.
- Understand application of acoustics in noise and music, musical scale, sonar and ultrasonic.
- Able to solve wave equation and understand significance of transverse waves.
- Able to solve wave equation of a longitudinal vibration in bars free at one end and also fixed at both the ends.
- Obtain boundary conditions of a longitudinal vibration in bars free at one end and also fixed at both the ends.
- Gain knowledge on applications of transverse and longitudinal waves.
- Understand the basic concepts of electric and magnetic fields.
- Understand the concept of conductors, dielectrics, inductance and capacitance.
- Gain knowledge on the nature of magnetic materials.
- Understand the concept of static and time varying fields.
- Gain knowledge on electromagnetic induction and its applications.
- Gain knowledge on EM waves, propagation and their properties.
- Ability to use Maxwell's equations in calculations featuring: both free and stationary electromagnetic waves.

Lab Work:

- Understand physical characteristics of SHM and obtaining solution of the oscillator using experiment.
- Use both analytical mathematics and numerical methods to explore the subjects mentioned above. In particular you should be able to analyse experimental oscillator or wave phenomena, such as sound, using suitable methods.
- Use Lissajous figures to understand simple harmonic vibrations of same frequency and different frequencies.
- Solve wave equation and understand significance of transverse waves.
- Solve wave equation of a longitudinal vibration in bars free at one end and also fixed at both the ends.
- Obtain boundary conditions of a longitudinal vibration in bars free at one end and also fixed at both the ends.

B.Sc. Part III

- Understand phenomenon based on light and related theories .
- Get skills to identify and apply formulas of optics and wave physics
- Understand the event like reflection, refraction, interference, diffraction etc
- Understand the applications of diffraction and polarization.

- Understand the applications of interference in design and working of interferometers.
- Understand the resolving power of different optical instruments.
- Understand working of optical fiber and their applications in communication.

- Understand the origins of quantum mechanics
- Understand and explain the differences between classical and quantum mechanics
- Understand the idea of wave function
- Understand the Schrodinger wave mechanics and operator formalism
- Solve the Schrodinger equation for simple 1D time-independent potentials
- Appreciate the importance and develop an understanding of angular momentum
- Develop the idea of spin and quantum statistical mechanics.

Lab Work

- Understand optical components and systems.
- Understand, and choose, different models for light.
- Ability to calculate light level and ray paths in optical systems.
- Understand the operating principle of some important types of optical instruments.

Zoology

B.Sc. Part I

- The students will be able to understand classify and identify the diversity of animals.
- The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.
- State the outline of animal classification of non-chordates and chordates.
- Classify the higher invertebrate and vertebrates' groups.
- Categorize the diversity fount in the invertebrate's groups of animals like Arthropoda, Mollusca and Echinodermata.
- Categorize the diversity found in the vertebrate groups of animals like reptiles, birds and mammals.
- Explain various adaptations in avian group as migration and flight in birds.
- The learner will understand the importance of cell as a structural and functional unit of life.
- The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates and extrapolates the life to the aspect of development.
- The cellular mechanisms and its functioning depend on endomembrane and structures. They are best are best studied with microscopy.

B.Sc. Part II

- Explain the comparative anatomy of various organ Systems of vertebrates:
- Knowledge of basic terms in physiology.
- Students are taught the detailed concepts of digestion respiration excretion the functioning of nerves and muscles.
- Students gain fundamental knowledge of animal Physiology.
- Students Gain knowledge about the comparative physiological concepts of nutrition digestion respiration excretion metabolism and osmoregulation.
- Explain the structure of the contraction of muscle.
- Explain the concept of nutrition and digestion.
- Illustrate the anatomy and physiology of heart and cardiac cycle.

- Justify the location and structure of eye, ear and their functions.
- Explain the Theories and Evidences of organic evolution.
- Describe the Evolution of Horse.
- Gain knowledge of variation, Mutation, Isolation and Natural selection.
- Give Knowledge of the Prawn Culture, Sericulture, Apiculture, Pisciculture, Poultry keeping, Elements of Past Control: Chemical & Biological Control.
- Give Knowledge Structure and function of Endocrine glands, Hormone receptor, Biosynthesis and secretion of thyroid, adrenal, ovarian and testicular hormones, Endocrine disorder of pituitary, Thyroid, adrenal and pancreas.

B.Sc. Part III

- To understand the basic theories and principles of ecology, ecosystems and their functioning to be aware of toxicants, their impacts on environment and remedial measures.
- To understand the microbial world, its structure and function and to familiarize with the applied aspects of microbiology.
- To make them aware of the pathogens, health related problems, their origin and treatment
- To get an in depth understanding of human genetics and genetic disorders
- To develop critical thinking, skill and research aptitude in the frontier areas of the biochemistry and biotechnology
- To understand the basic principal applications of analytical and separation techniques

Chemistry

B.Sc. Part I

- Students will learn atomic structure through basic concepts of Quantum Mechanics
- Students will understand periodic variations in properties of elements
- Students will acquire knowledge about various bonding's and theories of bonding's
- Students will be able to analyse qualitatively cations & anions applying principle of common ion and solubility product.
- Students will learn basic concepts of Organic Chemistry in reference to hybridization, bondings, stability
- They will acquire understanding in isomerism, stereochemistry, conformational analysis
- They will learn about aliphatic and aromatic hydrocarbons in details.
- Students are expected to learn the students are expected to learn the Mathematical concepts
- They will be able to understand gaseous states, colloidal states, solid state chemistry
- They will understand principle of Chemical Kinetics and application of Catalysts in Industry.

B.Sc. Part II

- Students will learn basic concepts of coordination chemistry
- Students will understand and will be able to interpreted properties of complex formation.
- Students will acquire knowledge about various bonding's and theories of complex formation.
- Students will be able to understand about Lanthanides and Actinides, Acids & Bases, non aqueous solvents.
- Students will learn and understand about Organic halides, Alcohols, phenols.
- They will acquire knowledge of mechanism of chemical reactions and kinetics.

- They will learn about Aldehyde's ketones, carboxylic acids, nitrogen containing organic compounds.
- Students are expected to learn fundamental concepts of Thermodynamics
- They will be able to understand laws of the urodynamics, thermochemistry
- They will understand principle of Chemical dynamics, chemical equilibrium, phase equilibrium
- Students will learn Laws of photochemistry, application in biochemical process.

B.Sc. Part III

- Students will learn through advance concepts of coordination Chemistry
- Students will learn magnetic behaviour of metal ligand complex, electronic spectra of TMC
- Students will acquire knowledge about various bonding's in organometallic compounds and Metal carbonyls
- Students will be able to acquire knowledge about biological process and role of trace elements
- Students are expected to learn the advance concepts of quantum Mechanics and their applications
- They will be able to understand application of molecular and nuclear Chemistry
- Students will learn principle of electrochemistry and application in Industry and techniques of Corrosion prevention
- Students are expected to learn the advance concepts of quantum Mechanics and their applications
- They will be able to understand application of molecular and nuclear Chemistry
- Students will learn principle of electrochemistry and application in Industry and techniques of Corrosion prevent