GOVERNMENT BILASA GIRLS P.G. COLLEGE BILASPUR (C.G.)

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution

B.Sc./B.A./B.Com./BBA/BCA/B.Sc.(H.Sc.) (Under Graduate Programme)

Note: Environmental Studies, English Language and Hindi Language are compulsory for all the students. In the Sixth Semester candidate has to opt any one subject of Skill Based courses.

Environmental Studies

Course Outcome

UG – I Semester

- To acquire awareness of the environment as a whole and its Related problems.
- To know ecology and environment of India and world.
- Effect of pollution on environment.
- Conservation of Flora and Fauna.

English Language

Course Outcome

UG – II & III Semesters

- Proficiency in reading and writing.
- To develop effective skills better social interaction and incalculable self directed learning.
- Analyze language at different language levels.
- Teach them the zeal of creativity by teaching them how to write.

Hindi Language

Course Outcome

UG – IV & V Semesters

- fgUnh Hkk'kk vkSj fyfi dk KkuA
- **O**;ogkfjd rkSj ij fgUnh dk iz;ksx o lS)kafrd le> fodflr djukA
- rduhdh "kCnkoyh ,oa vuqoknA
- dEI;wVj esa fgUnh ds vuqiz;ksxA
- fgUnh Hkk'kk vkSj mlds fofo/k #iks+ ¼ ltZukRed Hkk'kk] lapkj Hkk'kk] dk;kZy;hu Hkk'kk] foRr] of.kT; dh Hkk'kk vkfn½ dk ifjp;A

- lekpkj ys[ku ls ifjp;A
- fgUnh Hkk'kk] dkS"ky fodkl ds varxZr vuqokn dh le> jkstxkj ds volj iznku djukA

Skill Development Courses

UG – VI Semester

- Objective of Skill Development Courses is to create opportunity and scope for the development of basic livelihood skills in the students.
- To acquire basic skills in the field of interest, there are six Skill Based Courses run by the college; namely-
  Translation Proficiency
  Basics of Writing Skill in English
  Tally & e-Commerce
  Baking
  Fundamentals of Computers
  Speaking and Writing Urdu Language.

B.Sc. Chemistry

Programme Outcome

- To study the periodic properties of elements, geometry of molecules, characteristics of molecules.
- To study the fundamentals of reaction mechanism, aromaticity, stereochemistry, synthesis and applications of various organic compounds.
- To develop skills in different laboratory analytical works and handling instruments.

Course Outcome

1. **Semester-I**
   Knowledge of Atomic structure, Basic periodic properties, Chemical bonding, Ionic solids, Noble gases, Mechanism of organic reactions, Stereochemistry of organic compounds, Mathematical and Computer concept for chemist.
2. **Semester-II**
   Knowledge of S,P block elements, Alicyclic mononuclear polynuclear aromatic ring compounds, Alkyl and aryl halides, Ideal and non ideal solutions, Liquid crystal, Colloidal state, Chemical kinetics and catalysis.
3. **Semester-III**
   Knowledge of Transition elements, Oxidation reduction, Coordination compounds, Alcohols and phenols, Aldehydes and ketones, Carboxylic acids and their derivatives, Thermodynamics and Thermo chemistry.
4. **Semester-IV**

Knowledge of Lanthanides, Actinides, Acids, Bases, Non-aqueous solvents, Hard and soft acids and bases, Organic compounds of nitrogen, Heterocyclic compounds, Phase equilibrium, Electrochemistry.

5. Semester-V

Knowledge of Organometallic compounds, Bioinorganic chemistry, Amino acids and peptides, Proteins and nucleic acids, Physical and magnetic properties, Raman spectra, Photochemistry.

CBE Paper-I

Polymer, Organic polymer, Inorganic polymers, Synthetic Drugs, Synthetic dies I&II.

CBE Paper-II

Organometallic chemistry, Bioinorganic chemistry, Amino acids & peptides, Proteins & Nucleic acids, Physical properties & Molecular structure, Magnetic properties, Thermochemistry & Photochemistry.

CBE Paper-III

Error in chemical analysis, Chromatography, Analysis of water, Titrimetric methods of analysis, Solubility equilibria, Electro analytical methods.

6. Semester-VI

Knowledge of Metal ligand bonding in transition metal complexes, Thermodynamic and kinetic aspects of metal complexes, electronic spectra of complexes, Organo sulphur compounds, Carbohydrates, Fundamentals of spectroscopy and Quantum mechanism.

B.Sc. Zoology

Programme outcome

After completion of the program, the students will able to

1. Understand the scientific terms, concepts, facts, phenomenon and their interrelationships
2. Understand systemic position and organization of animals through study of classification
3. Know and appreciate life processes governing life from acellular, multicellular and tissue grade organization
4. Apply the subject knowledge for day-to-day use
5. Develop skills and abilities in practical work, handling instruments in laboratory experiments
6. Appreciate the tenets of the subject, contribution of scientists and scientific programs.

Course outcome

Semester I: Cell Biology and Non-Chordata

1. Understand the scientific terms, concepts, facts, phenomenon and their interrelationships
2. Classification- Classification of Invertebrate and vertebrate phyla to understand Systematic position, special features of vertebrate at structural organization level
3. Cytology- Give general idea of organization at cellular level and their role in governing cellular processes

Semester II: Vertebrates, Embryology, Ecology , & Environmental Biology

4. Embryology- understand developmental process in vertebrates, to know various strategies of embryonic development among vertebrates
5. Ecology and Environment- make student aware of ecology and environment at local, national and Global level

Semester III: Anatomy – Physiology and Evolution

6. Comparative anatomy and Physiology- know and appreciate complexity of vertebrate structure evolved from lower to higher strata. Various Physiological processes for different habitat conditions
7. Evolution: to understand evidences and theories of evolution, understanding variation which is the basis of evolution, causes of variation.

Semester IV: Choice Based Course – A- Economic Zoology

8. To learn applied aspect of Zoology
9. Study various culture methods, and apply this knowledge for economic gains.

Semester IV: Choice Based Course – B- Wild Life Conservation and Management

10. Study of wild life and its conservation
11. Knowledge of Wild life Legislation – Wild Protection act - 1972, its amendments and implementation.
12. Protected areas National parks & sanctuaries, Community reserve; Important features of protected areas in India; Tiger conservation

Semester IV: Choice Based Course – C Immunology

1. Understanding the way in which body defends itself against invading organisms or internal invaders
2. Understanding component of immune system, Innate and acquired immunity, mechanisms involved in the development of immunity
3. Basic knowledge of Immune technology

Semester V: Vertebrates Endocrinology, Reproductive Biology, Behavior, Toxicology & Microbiology and Medical Zoology

4. Endocrine and Reproductive biology – basic knowledge of endocrine glands, structure, Biosynthesis, effect of hormones, and mode of action
5. Behavior- general idea of animal behavior, from simple taxis to complex behavior
6. Toxicology- general idea of toxicants, metallic, non-metallic, from plant and animal source. Effect of toxicant and treatment

Semester VI: Genetics. Cell Physiology, Biochemistry, Biotechnology, Bio-techniques

7. Genetics- knowledge of classical genetics, genetic interactions and Basic genetics at molecular level
8. Biochemistry Structure of Bio-molecules, and their metabolism to understand fate of these molecules within the body and their significance

9. Biotechnology – basic techniques used in biotechnology and application of biological organisms or processes for manufacture of useful products

B.Sc. Botany

Programme Outcome

1. Terminology, phenomenon, concepts and classification of plants and its scientific importance.
2. Introduction and awareness of the related flora (Biodiversity)
3. Practical aspects and knowledge of cell division and growth of plants.

Course Outcome

1. CCB – 01:- **Biodiversity (Microbes, Algae, Fungi and Archegoniate):-**
Understanding regarding Microbes, Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms including general characteristics, classifications, morphology and anatomy reproduction and economic importance.

2. CCB – 02:- **Cytology, Genetics and Molecular Biology:-** Knowledge of cellular organization and their role in governing cellular processes. Knowledge of genetics, genetic interactions and basic genetics at molecular level.

3. CCB – 03:- **Choice Based Course: Ethno botany & Herbal Technology:-**
Basic idea of Ethno botany folk medicines, herbal medicines. Study of Pharmacognosy of medicinally important plants. Assignments based on ethnic herbal medicinal.

4. CCB – 04 :-**Ecology and Systematic Botany :-**
Knowledge of ecosystem, plant communities, phytogeography, ecological factories and pollution study. Introduction with Hydrophytes and Xerophytes and approaches to the plant collection. Taxonomic description and Modern taxonomy.

5. CCB – 05:- **Anatomy, Embryology and Economic Botany:-**
Knowledge of tissue, normal and abnormal secondary growth, embryology and cultivation of major cereals pulses vegetables spices timber and medicinal plants of Chhattisgarh state. Embryological slide preparation. Plants collection. Internal structure of Dicot and Monocot root stem and leaf etc.

5.CCB – 06 :- **Plant Physiology and Biotechnology**:-

Knowledge of plant water relation, metabolism, growth regulators, light and temperature effect and fundamentals of Biotechnology.

B.Sc. Clinical Nutrition

Programme Outcome

Students with B. Sc.CN developed capacity under wild field of clinical dietetics they gain knowledge of anatomy, physiology clinical and nutritional biochemistry and clinical dietetics, they can plan for normal and therapeutic condition of patient by using food exchange list, and by making therapeutic modification of normal meal.

Course Outcome

1st Semester- Anatomy & Physiology-To provide knowledge regarding anatomy and physiology of human body

2nd Semester- Anatomy & Physiology - To provide knowledge regarding anatomy and physiology of human body with practical on human blood analysis

3rd Semester-Biochemistry & Microbiology – To provide knowledge regarding various metabolic cycles , biochemistry of structural molecules of human body , Detoxication, Hormones, Enzymes ,common microbes and related diseases , microbiology of various foods.

4th Semester-Basic Dietetics & Community Nutrition- To provide knowledge regarding basic nutritional composition of diet, their role inhuman body, Community diseases due to nutritional deficiencies and their remedy.

5th Semester –Sports Nutrition-To provide knowledge regarding sports related activities and their nutritional requirements, endurance and nutrition.

6th Semester-Clinical Dietetics- To provide complete knowledge of dietary treatments of all diseases.

- **Sill Development related Courses** –**Baking** –To provide knowledge regarding baking process and various baked products.

  HONOURS PAPERS-

  3RD Semester –

  Hepatonutrition - To gain complete knowledge regarding anatomy and physiology of Liver, Nutrition for Liver, various Hepatic diseases and their treatments, biochemical estimations related to hepatic diseases.

  4th Semester –

  Cardionutrition – To gain complete knowledge regarding anatomy and physiology of heart , cardiac cycle, nutrition for heart, ECG, various cardiac diseases and their treatments.

  5th semester –

  Renonutrition – To gain knowledge regarding kidney, anatomy and physiology, renal activities , treatments for various renal diseases. Dialysis and renal replacements, renal cancer.

  6thSemester –

  Diabetonutrition – Knowledge regarding various types of Diabetes, etiopathology, treatments dietetic treatments**.**

B.Sc. Food Science and Quality Control

Programme Outcome

Students with B.Sc. Food Science and Quality Control gained knowledge of Food Chemistry, Food Microbiology, Preservation, and Processing Technology, They develop capacity to work in different food unit as food developer, also in microbiology labs, in food preservation analysis and processing unit, they also gain enough knowledge to identify food toxicant s and do remedy accordingly

Course Outcome

1ST Semester- Basic Nutrition & food Chemistry- To provide knowledge regarding Nutrients and their chemistry .

2nd Semester-Food Microbiology & Sanitation- To provide knowledge regarding microbes in foods, their effects and prevention of microbiological attacks.

3rd Semester-Food Preservation Sensory Evaluation & Packaging- To provide knowledge regarding technology of food preservation and processing, testing their quality with packaging technology.

4th Semester-Post Harvest Technology &Analytical Instrumentation- To provide knowledge regarding minimizing post-harvest nutritional losses and how to analyze the nutritional composition of various foods

5th Semester-Food Analysis & Food Toxicology- To provide knowledge regarding analysis technology of food analysis and naturally toxicants in foods

6th Semester- Food Manufacturing, Adulteration & Testing- To provide knowledge regarding food production technology and adulteration, testing of adulterants

- **Sill Development related Courses** –**Baking** –To provide knowledge regarding baking process and various baked products.

Honors Papers-

3rd Semester-

Hepatonutrition - To gain complete knowledge regarding anatomy and physiology of Liver, Nutrition for Liver, various Hepatic diseases and their treatments, biochemical estimations related to hepatic diseases.

4th Semester -

Cardionutrition – To gain complete knowledge regarding anatomy and physiology of heart, cardiac cycle, nutrition for heart, ECG, various cardiac diseases and their treatments.

5th Semester -

Reno nutrition – To gain knowledge regarding kidney, anatomy and physiology, renal activities, treatments for various renal diseases. Dialysis and renal replacements, renal cancer.

6th Semester -

Diabetonutrition – Knowledge regarding various types of Diabetes, etiopathology, treatments dietetic treatments**.**

B.Sc. Mathematics

Programme Outcome

- It provides a base for higher studies and refines the brain of students in comparison to other students as study of mathematics helps to increase the act of logical thinking.
- Students can apply their knowledge in other branches of study as mathematics find application in every field of knowledge.

- Students of science have greater chance of employment e.g. in finance and investment. teaching, keep up mathematical knowledge in the changing environment of technology.
- Study of mathematics enhances personal development. One learns to develop skills and time management.

Course Outcome

Semester I Calculus and Algebra I

- By learning the topics taught in this paper student learns how to tackle problems of successive differentiation in other branches of science. Topics like curvature and curve tracing find applications in a number of research fields. Vector calculus too is very useful in building the concepts of Physics.
- **Algebra: Student will be able to**
- Apply De Morgan's theorem on functions properties of direct inverse and hyperbolic function.
- To find the logarithm of complex quantities.
- To expand trigonometric function.
- To solve the problem of roots and coefficient of polynomial of the variables.
- To apply Descant's only to find roots.
- To solve the cubic equations.
- To transform different kinds of polynomials.

Semester II Calculus and Algebra II

- In integral calculus student learns to find length, area, volume and surface of revolution of standard curves. A student can apply his knowledge of calculus in physics, chemistry statistics and can also create mathematical models in order to arrive into an optimal solution.
- Algebra: Students will learn
- To Identify and solve the first order and first degree linear differential equations.
- To find orthogonal trajectories.
- To solve exact and differential equation of second order simultaneous equations.
- To define mapping relations congruence modulo.
- To find gcd of problems based on congruence modulo.
- To define group, subgroup and properties.
- To find order and generator of group.
- To use of cosset decomposition in the langrage's theorem.
- To understand homorphism and isomorphism.
- To construct normal, quotient group.
- To find kernel of Homomorphism.

Semester III Advanced Calculus and Differential Equation I

- The topics taught in this paper serve as pivot for other branches of science. For example, partial differentiation, Laplace's transformations are few topics in which student must have a good knowledge to understand the concepts of Physics, Chemistry etc.
- To solve the differential equation by power series Frobenien's method.
- To solve Bessel's, Legendre's equation.
- Familiar with generating function recurrence relation.
- To solve orthogonality strum- Liouville problem.
- To find Laplace transform.
- To find inverse Laplace transform.
- To apply shifting theorem to solve problems.
- To solve differential equation with the help of Laplace transform.

Semester IV Advanced Calculus and Differential Equation II

- Topics taught in this paper like envelope, evolutes, Beta function, Gamma function have been introduced to handle the topics in Physics.
- To solve differential equations of first order.
- To solve equation with Lagrange's and char pits method.
- To solve D. E of second and higher orders.
- To classify D. E , reducible to equation with constant Coefficient.
- To define proximity, maximal's, externals.
- To solve boundary value problem with the help of Euler's Lagrange's equation.
- To find the externals.

Semester V Analysis and Algebra I

- To perform basic mathematical operation on complex number
- To define continuity and differentiability.
- To find differentiable and non-differentiable.
- To define analyticity, find CR equations.
- To find harmonic function.
- To formation of analytic function with the help of Mile Thomson method.
- To identify different type of Elementary function.
- To decide when and where are given function is analytic.
- To precise and accurate mathematical definition of object in ring theory.
- To use definition to identify and construct examples.
- To analyze and demonstrate example of Ideas and quotient rings.
- To use rings like polynomial and modular rings.
- Use concept of homomorphism, isomorphism for rings.
- analyze finite and infinite dimensional vector space subspace over field, including properties structures of vs.
- Compute Eigen values and eigenvectors and applied the basic diagonalization.
- Compute inner product including Graham Schmidt process.

Semester VI Analysis and Algebra II

- To understand the metric space properties and able to verify whether a given function is metric.
- To explain the geometric meaning of metric.
- To distinguish between open and closed balls.
- To define convergence for sequence in a m s.
- Continuity of a function between two m s.
- To understand contraction principle, dense, subsets, separable space.
- To understand FIP, continuous function, compact set.
- To explain linear transformation and their representation as matrices.
- To find the rank and mobility.
- To find the basis.
- To evaluate Eigen values at Eigen vector of LT
- To formation of inner product spaces
- To distinguish the orthogonal set
- To orthogonalize the finite dimensional vector spaces.

B.Sc. Physics

Programme Outcome

The main mission of the U.G. degree program is to understanding of core knowledge in physics, including the major premises of classical mechanics, quantum mechanics, electromagnetic theory, Basic electronics, optics, special theory of relativity and modern physics.

- ✓ Students will demonstrate written and oral communication skills in communicating physics-related topics.
- ✓ Students will design and conduct an experiment (or series of experiments) demonstrating their understanding of the scientific method and processes. Students will demonstrate an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.
- ✓ Students will demonstrate a thorough understanding of the analytical approach to modelling of physical phenomena.

Course Outcome

Semester -1 Mechanics, Oscillations and properties of Matter

- ✓ Understand the definition for centre of gravity in hemisphere, hollow hemisphere etc.
- ✓ Understand the dynamics and gravitation.
- ✓ Study the behavior of rigid body dynamics.
- ✓ Study the elastic behavior and working of torsion pendulum.
- ✓ Study of bending behavior beams and analyze the expression for young's modulus
- ✓ Understand the surface tension and viscosity of fluid

Semester -2 Electrostatic and steady current

- ✓ Study the electric field using coulomb's inverse square law in electrostatics of current
- ✓ Analyze the chemical and heating effect of current
- ✓ Analyze the relations between b, h and m
- ✓ Understand the faradays laws of electromagnetic induction by Rayleigh's method
- ✓ Analyze the value of Maxwell equation.

Semester -3 Thermodynamics, kinetic theory and statistical physics

- ✓ Understand the nature law of thermodynamics and entropy.
- ✓ Analyses of zeroth law of thermodynamics and entropy.
- ✓ Understanding the low temperature physics.
- ✓ Analyses thermal conductivity and black body radiation.
- ✓ Understanding the statistical method

Semester -4 Wave, acoustic and optics

- ✓ Analyze waves and oscillations.
- ✓ Study the basic properties and production of ultrasonic by different methods.
- ✓ Understand the natural behavior of aberration in lens
- ✓ Study the theory and experiment of interference using air wedge, Newton's rings and Michelson interferometer
- ✓ Study the theory and experimental past of diffraction by Fresnel's and Fraunhofer methods.
- ✓ Study the theories for production of polarization of light.

Semester -5 Relativity, quantum mechanics, Atomic Molecular and nuclear physics

- ✓ Understand the negative result of Michelson Morley experiment, Galilean and Lorentz transformation.
- ✓ Learn the mathematical tools needed to solve quantum mechanics problems.
- ✓ This will include complex functions and Hilbert spaces.
- ✓ Analyze the ideas of basics of nucleus and their energy.
- ✓ Perform the procedures for nuclear fission and fusion.

Semester -6 Solid state physics, solid state devices and electronics

- ✓ Understand the basic concepts of force between atoms and bonding between molecules
- ✓ Analyze the relationship between conductors and insulators and superconductivity
- ✓ Understand the properties of matter and classifications -polarization
- ✓ Understand the properties of semiconductors
- ✓ Analyze the relationship between semiconductors devices and understand the applications of semiconductor devices

B.Sc. Computer Science

Program Outcome

After Completing the Bachelors of Computer Science (B.Sc. Computer Science) Students are able to:

- ✓ Improve their computer literacy, their basic understanding of operative systems and a working knowledge of software commonly used in academic and professional environments.
- ✓ Develop criteria to organize and present different type of works in academic and professional environments.
- ✓ Learn how to organize information efficiently in the forms of outlines, charts, etc. by using appropriate software.
- ✓ Develop the skills to present ideas effectively and efficiently. do Academic and Professional Presentations - Designing and delivering an effective presentation and developing the various IT skills to the electronic databases.
- ✓ Use the Systems Analysis Design paradigm to critically analyze a problem.

Course Outcome

Semester-I Computer Fundamental & PC Packages

At the end of course, students will be able to

- ✓ Understand the concept of input and output devices and the basic terminologies used in the computer.
- ✓ Identify categories of programs, system software and applications. Organize and work with files and folders
- ✓ Utilize the Internet Web resources and evaluate on-line e-business system.
- ✓ Solve common business problems using appropriate Information Technology applications and systems.
- ✓ Identify the parts of the Windows operating system and uses of common Windows OS elements.
- ✓ Learn Modern office activities and their software requirements.
- ✓ Create a new Word document and formatting a document using MS-WORD.
- ✓ Create an electronic spreadsheet using MS-Excel, familiarize oneself with Excel's basic and advance features.
- ✓ Create slide show presentation concepts and explore the Microsoft Office PowerPoint environment.
- ✓ Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards.

Semester – II - Programming Methodology with C

At the end of course, students will be able to

- ✓ Understand the fundamental programming concepts and methodologies which are essential to create good C programs.
- ✓ Code, test, and implement a well-structured, robust computer program using the C programming language.
- ✓ Write reusable modules (collections of functions).
- ✓ Understand design/implementation issues involved with variable allocation and binding, control flow, types, subroutines, parameter passing.

B.Sc. Semester-III - Computer Architecture

At the end of course, students will be able to

- ✓ **U**nderstand the fundamental concepts and techniques used in digital electronics.
- ✓ Understand and examine the structure of various number systems and its application in digital design.
- ✓ Understand, analyze and design various combinational and sequential circuits.
- ✓ Classify different semiconductor memories.
- ✓ Minimize the Boolean expression using Boolean algebra and design it using logic gates.
- ✓ Introduce the basic organization of computer system.
- ✓ Describe control unit operations and conceptualize instruction level parallelism.
- ✓ Demonstrate and perform computer arithmetic operations on integer and real numbers.
- ✓ Categorize memory organization and explain the function of each element of a memory hierarchy.
- ✓ Identify and compare different methods for computer I/O mechanisms.

B.Sc. Semester IV- Introduction to Data Structure and Oops

At the end of course, students will be able to

- ✓ Understand the basic terminology used in computer programming.
- ✓ Use different data types in a computer program.
- ✓ Practice the fundamental programming methodologies in the C++ programming language.
- ✓ Code, test, and implement a well-structured, robust computer program using the C++ programming language.
- ✓ Write reusable modules (collections of functions).
- ✓ Develop logics which will help them to create programs.
- ✓ Use different types of data structures, operations and algorithms.
- ✓ Implement appropriate sorting/searching technique for any given problem.
- ✓ Use stack, Queue, Lists, Trees and Graphs in problem solving.
- ✓ Find suitable data structure during application development/Problem Solving.

Semester-V - System Analysis and Designing

At the end of course, students will be able to

- ✓ Introduce established and evolving methodologies for the analysis, design and development of an information system.
- ✓ Understand system characteristics, managing projects, prototyping.
- ✓ Understand and plan systems development life cycle phases.
- ✓ Analyze a programming problem and design an appropriate solution using a combination of tools and techniques.

Semester-VI - Data Base Management Systems & Web Technology

At the end of course, students will be able to

- ✓ Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- ✓ Practice SQL programming through a variety of database problems.
- ✓ Demonstrate the use of concurrency and transactions in database
- ✓ Design and build database applications for real world problems.
- ✓ Is able to imply join concepts on tables.
- ✓ Learn and practice data modeling using the entity relationship and developing database designs.
- ✓ Apply normalization techniques to normalize the database.
- ✓ Design data base and normalize data and understand how query are being processed and executed.
- ✓ Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access
- ✓ Understand types of Data Base failures and Recovery.

BCA

Programme Outcome

- Apply the knowledge of Computer Science to algorithm, web design and networking.
- Apply technical, critical thinking and problem-solving skills in finding solutions to complex problems facing the society and nation at large.
- Demonstrate inter-personal skills and leadership qualities to function effectively in diverse, multi-cultural & multi-disciplinary teams.
- Display essential skills and ethical values as demanded by the global software industry
- Demonstrate the ability to adapt to the latest trends in technology with hands-on-training workshops.
- Display competencies for self-directed and continuous learning.
- Understand the impact of ICT in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development

Course outcome -

Discrete Mathematics

- Upon completion of the course, the student will be able to use logical notation
- Perform logical proofs
- Apply recursive functions and solve recurrence relations
- Determine equivalent logic expressions
- Describe useful standard library functions, create functions, and declare parameters

- Uses of graphs and trees
- Apply basic and advanced principles of counting
- Define sets and sequences and calculate discrete probabilities.
- Design and evaluate Euler and Hamilton circuits

Computer Fundamentals

- Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system
- Be able to identify computer hardware and peripheral devices
- Be familiar with various types of software and software applications
- Understand Memory and file management
- Understand the DOS commands and Windows features.

Programming in C Language

- Understand the basic terminology used in computer programming
- Understand different data types, operators and its types, operator precedence and associativity in C language.
- Design programs involving decision structures, loops and functions.
- Explain the difference between call by value and call by reference.
- Understand the dynamics memory by the use of pointers.
- Use different data structures and create/update basic data files and Apply logical skills to programming in a variety of languages

PC Software and Multimedia

- Understand creating and formatting basic documents in word processor software with their properties.
- Understand the creating and using formulas and charts in worksheets
- Able to create presentations and can apply various animations on it.
- Understand the creating and using structure query language queries in database
- Able to understand, create and manage various multimedia and its tools.

Web Technology and E-Commerce

- Understand the basics of Internet and its protocol.
- Analyse a web page and identify its elements and attributes.
- Create web pages using HTML and Cascading Styles sheets

- Build dynamic web pages using JavaScript (client-side programming).
- Understand and develop a PHP Programs with their environment.
- Understand the basics of E-Commerce.

PC Software Lab

- Understand creating and formatting basic documents in word processor software with their properties.
- Understand the creating and using formulas and charts in worksheets • Able to create presentations and can apply various animations on it.
- Understand the creating and using structure query language queries in database • Able to understand, create and manage various multimedia and its tools.

C Language Lab

- Design programs using control statements and operators of C- language.
- Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.
- Design graphics programs using C language.

Web Technology Lab

- Design web pages.
- Format and validate web pages.
- Design web sites and deploy it on web servers.

Calculus and Differential Equations

- Recognise differential equations that can be solved by each of the three methods – direct integration, separation of variables and integrating factor method – and use the appropriate method to solve them
- use an initial condition to find a particular solution of a differential equation, given a general solution
- check a solution of a differential equation in explicit or implicit form, by substituting it into the differential equation
- understand the terms ‘exponential growth/decay’, ‘proportionate growth rate’ and ‘doubling/halving time’ when applied to population models, and the terms ‘exponential decay’, ‘decay constant’ and ‘half-life’ when applied to radioactivity
- Solve problems involving exponential growth and decay.

Database Management System

- Knowledge & Understanding: Databases and their design & development

- Intellectual Cognitive/ analytical skills: Normalization of Databases.
- Practical Skills :Using SQL and PL/SQL.
- Transferable skills: Usage of DBMS design and administration.
- Gather data to analyse and specify the requirements of a system.
- Design system components and environments.
- Build general and detailed models that assist programmers in implementing a system.

Programming in C++

- Understand object-oriented programming features in C++.
- Apply these features to program design and implementation.
- Understand object-oriented concepts and how they are supported by C++.
- Gain some practical experience of C++.
- Apply the facilities offered by C++ for Object-Oriented Programming.

Computer Networks

- State the fundamentals related to network security and basics of IPv6 and IPsec.
- State the fundamentals related to network security and basics of IPv6 and IPsec.
- Explain various protocols related to internet key exchange.
- Study Adhoc network and its protocols.
- Define various examples of wireless communication system, standards related to 2G and 3G wireless networks.

Operating System with Linux

- Understand the basics of operating systems like kernel, shell, types and views of operating systems
- Describe the various CPU scheduling algorithms and remove deadlocks.
- Explain various memory management techniques and concept of thrashing.
- Use disk management and disk scheduling algorithms for better utilization of external memory.
- Recognize file system interface, protection and security mechanisms.
- Explain the various features of distributed OS like Unix, Linux, windows etc.

OOPS Lab Using C++

- Understand key features of the object-oriented programming language such as encapsulation (abstraction), inheritance, and polymorphism.
- Design and implement object-oriented applications.

- Analyse problems and implement simple C++ applications using an object-oriented software engineering approach.

RDBMS Lab

- Demonstrate an understanding of the relational data model.
- Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.
- Formulate, using relational algebra, solutions to a broad range of query problems.
- Formulate, using SQL, solutions to a broad range of query and data update problems

Operating System Lab

- Students will be able to understand key features of the various Operating System.
- Implement various commands of Linux Operating System.
- Students will be able to understand the directory structure of Operating System.

Calculus & Geometry

- Gain Knowledge of fundamental concepts of real numbers and verify the value of the limit of a function at a point using the definition of the limit
- Introduction to sequence and series.
- Learn to check function is continuous understand the consequences of the intermediate value theorem for continuous functions.
- Introduction to analytical geometry of 2 dimensional.
- Study of lines in 2 and 3 dimension and Finding equation in various form of line, circle, ellipse, sphere, cones etc.

Differential Equations & Fourier Series

- Check a solution of a differential equation in explicit or implicit form, by substituting it into the differential equation
- Understand the terms ‘exponential growth/decay’, ‘proportionate growth rate’ and ‘doubling/halving time’ when applied to population models, and the terms ‘exponential decay’, ‘decay constant’ and ‘half-life’ when applied to radioactivity
- Solve problems involving exponential growth and decay.
- TO represent periodic functions using Fourier series
- Get an idea of power series method to solve differential equations Familiar with Legendre equation and Legendre polynomial

Computer System Architecture

- Describe the fundamental organisation of a computer system and number systems

- Explain the Boolean algebra with simplification methods and various types of logic circuits
- Explain fundamental functions of CPU Organization.
- Describe basic concept of Input-output organization
- Distinguish the organization of various parts of a system memory hierarchy and memory management system.

Software Engineering

- Understand the importance of the stages in the software life cycle.
- Understand the various process models.
- Understand the concept of software requirement specification.
- Be able to design software by applying the software engineering principles.
- Understand the concept of software requirement specification.

Multimedia tools and application

- Understand the concept and needs and areas of use, Development platforms for multimedia.
- Understand the concept of sound and formats and basic concept of animations.
- Understand the various formats of video formats and video editing and movie making tools.
- Understand the various Authoring tools for CD Based Multimedia.
- Understand the Multimedia on the Web.

Multimedia tools and application Lab Upon completion of the course the participant will be able to:

- Create a well-designed, interactive Web site with respect to current standards and practices
- Demonstrate in-depth knowledge in an industry-standard multimedia development tool and its associated scripting language
- Determine the appropriate use of interactive verses standalone Web applications
- Create time-based and interactive multimedia components
- Identify issues and obstacles encountered by Web authors in deploying Web-based applications

Financial Accountancy

- Understand the basic concepts of Financial Accounting
- Prepare final accounts of sole trader
- Calculate Profits or losses from incomplete records
- Understand concepts of cost accounting.
- Understand concepts of Budgetary and Budgetary control

Project Upon completion of the course the participant will be able to:

- Understand the requirement and analyse the client for the software development process.
- Create a well-designed, interactive software with respect to current standards and practices
- Demonstrate in-depth knowledge in an industry-standard software development tool.
- Determine the appropriate use of Language tools to develop and deploy software

PGDCA

Course Outcome

Introduction to Software Organization. After studying this course, students will be able to:

- Understand the history and various generations of computer, characteristics of computer and its types, logic gates, number system.
- Understand computer organization and memory devices.
- Familiar with various types of software and software applications
- Familiar with various types of Programming language and language translators.
- Familiar with various Internet and Computer network basics.

Programming in C Language

- Understand the basic terminology used in computer programming
- Understand different data types, operators and its types, operator precedence and associativity in C language.
- Design programs involving decision structures, loops and functions.
- Explain the difference between call by value and call by reference.
- Understand the dynamics memory by the use of pointers, structure and union.

Office Automation and Tally

- Understand creating and formatting basic documents in word processor software with their properties.
- Understand the creating and using formulas and charts in worksheets
- Able to create presentations and can apply various animations on it.
- Understand the creating and using structure query language queries in database
- Able to create and manage transactions of various accounts in tally software.

Practical -

- Understand creating and formatting basic documents in word processor software with their properties.
- Understand the creating and using formulas and charts in worksheets
- Able to create presentations and can apply various animations on it.
- Understand the creating and using structure query language queries in database
- Able to understand, create and manage accounts in tally.

Practical -

- Design programs using control statements and operators of C- language.
- Understand and apply the pointers, memory allocation techniques and use of files for dealing with variety of problems.
- 3 Design graphics programs using C language.

Programming in Visual Basic Upon completion of the course the participant will be able to:

- Understand The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.
- Build effective user interfaces with Visual Basic controls, forms, and other GUI components.
- Learn the use of the debugging and testing tools available in Visual Studio.
- Use Database access using Visual Basic's ADO Control and data-aware components like the Data Grid and Data Environment Designer.
- Use the Packaging and Deployment tool to deliver completed applications to end users.

DBMS

- Knowledge & Understanding: Databases and their design & development
- Intellectual Cognitive/ analytical skills: Normalization of Databases.
- Practical Skills: Using SQL and PL/SQL.
- Transferable skills: Usage of DBMS design and administration.
- Gather data to analyse and specify the requirements of a system.
- Design system components and environments.
- Build general and detailed models that assist programmers in implementing a system.

Essentials of E-Commerce & HTML

- Understand the basics of Internet and its protocol.
- Analyse a web page and identify its elements and attributes.

- Create web pages using HTML and Cascading Styles sheets
- Build dynamic web pages using JavaScript (client -side programming).
- Understand the basics of E-Commerce.

Practical Based on after the completion of the course -

- Understand the difference between Console programming and GUI programming.
- Able to design GUI Application using The Visual Basic Integrated Development Environment (IDE) and its wealth of development tools.
- Able to design a software with database.

Project on completion of the course the student will be able to:

- Understand the requirement and analyse the client for the software development process.
- Create a well-designed, interactive software with respect to current standards and practices
- Demonstrate in-depth knowledge in an industry-standard software development tool.
- Determine the appropriate use of Language tools to develop and deploy software.

Programme Outcome – Bachelors of Arts (BA) 2021-2022

- Understand the significance of Arts education in fostering a positive culture and climate in society and in enabling character formation.
- Speak, read, write and listen clearly in person and through electronic media in English and in Hindi language.
- Analyse and apply creative and critical thinking skills to real-life situations for ethical decision making.
- Recognize the dynamics of team behaviour, communication and leadership.
- Understand and appreciate diversity in various aspects of society for sustainable human development.
- Develop an appreciation of themselves and of others in local, regional, national, and global contexts.
- Demonstrate cultural sensitivity towards becoming global citizens.
- Engage in life-long learning towards building resilience and developing adaptability

B.A History

PROGRAMME OUTCOME

- To familiarize the students with the culture, civilization and development of political and social institutions in India.
- To develop awareness towards foreign invasion on India and its effect on Indian Culture and life of the people.
- To prepare the student to understand imperialism and colonialism and its effect on India.

- To understand the development of freedom struggle and its nature.
- To develop awareness towards the leading events of the history of Europe, America, and Asia and their co-relation to other parts of the World.

COURSE OUTCOME

Semester I

- To familiarize the students to the political, social, economic, and cultural aspects of Ancient India and Chhattisgarh.
- To prepare the students to understand the Cultural, Social, Political, Economic, and Literary Developments and changes in Ancient India and Chhattisgarh.

Semester II

- To familiarize the students to the history of Modern World.
- To understand the Co- relation of the events happening in the countries of Europe, Asia, and America.

Semester III

- To familiarize the students to the Political, Social, Economic, and Cultural aspects of Medieval India and Chhattisgarh.
- To prepare the students to understand the foreign invasions and its cultural, social, political, and economic impact on India.

Semester IV

- To familiarize the students to the leading events of World History.
- To prepare the students to understand International Events and its relation to other countries of the World.

Semester V

- To familiarize the students to the Political, Social, Economic, and Cultural History and administration of India during British rule and its effect on India and Chhattisgarh.

Semester VI

- To prepare the students to understand the Emergence of Nationalism and development of National Movement in India and Chhattisgarh, Participation of India and merger of princely States.

B.A. Economics

By completion of the program, the students will able to,

• Understand the basic concepts, fundamental principles related to economics and their relevance in the day-to-day life.

• Economics is the study of how societies, government, business, households and individuals allocate their scarce resources.

• The study of economics can also provide valuable knowledge for making decision in everyday life.

• Economics is the study of how people decide to use resources on an individual and a collective basic.

• Realised that knowledge of economics in other humanities can have greatly and effectively influence which inspires in evolving new theories.

Semester II: PAPER I : Pricing & Distribution Analysis in Micro Economics

• Get introduced to the frame work for learning about markets. Perfect completion, monopoly, monopolistic completion, oligopoly and duopoly.

• To understand introductory microeconomics theory in a local regional and international scenario.

• Gain knowledge about welfare economics, linear programming and game theory.

PAPER II: Theories of Economics Growth & Development

• To enable the students to understand the various theories of economic growth.

• Understand the Neo – classical theories and practical theories of development and its applicability in the planning of India.

SEMESTER III: MACRO ECONOMICS

• Using employment and national income statistics students will be able describe and analyse the economy in quantitative terms.

• The students will be able to understand the meaning, objectives and function IMF, World Bank and WTO.

• Outline the role of comparative advantage in exchange and describe the role of international trade and finance in domestic economic activity.

SEMESTER III (CBCS): Agriculture & Industrial Economics

• Students are able to know how the world work, including agriculture, business and governments.

• Get knowledge about land reforms in India and evaluation of land r Programmers.

• Understand the cooperative marketing in India, they study about the Significance of public enterprises in India.

• Knowledge about basic industries and their problems in India. Course Outcome (U.G. Economics)

SEMESTER IV: Money, Banking & Public Finance

• To know what are the causes of inflation and deflation.

• What tools Central Bank have and how does monetary policy affect the economy.

• To demonstrate the meaning and function of money.

• Identify types of banks, understand the sources of finance both public and private

• Understand the meaning and scope of public finance, public expenditure, public revenue, public debt and their theories and Financial Administration. Course Outcome (U.G. Economics)

SEMESTER V: Development and Environmental Economics

• To enable the students to understand the theories and strategies of growth and development. • To impart knowledge about the issues relating to sustainable development, Environment Protection and Pollution control measures.

• Understand the concept of Intellectual Capital, efficiency and productivity in agriculture; the choice of techniques and the role of monetary and fiscal policy in developing countries.

SEMESTER VI : Statistical Methods

• How to calculate and apply measures of location and measures of dispersion grouped & ungrouped cases.

• Understand the methods of sampling and census.

• Understand the correlation, Index number and their applicability.

B.A. Sociology

- Sociology seeks to understand all aspects of human social behavior, including the behavior of individuals as well as the social dynamics of small groups, large organizations, communities, institutions, and entire societies.
- Sociologists are typically motivated both by the desire to better understand the principles of social life and by the conviction that Understanding these principles may aid in the formulation of Enlightened and effective social policy.
- Sociology Provides an intellectual background for students considering careers in the professions or Business.

Contemporary Indian Society

• Every society has its own peculiar structure and there are some institutions universal to every society, but with their unique manifestations in each society.

• There are some change agents and initiatives that enable the society to change with the passage of time.

• This paper focuses on the structure of the Indian society and the changing aspects with the processes operating, change agents and initiatives. After studying the Contemporary Indian society, the student can Get an impression about the basic composition of Contemporary Indian society, its historical moorings, basic Philosophical foundations of the society and the institutions. Learn about the changing institutions, the processes, the agents and the interventions that bring about change in the Indian society. Learn about the concept and effects of Dowry, Domestic Violence and Divorce on society Learning Outcomes: This paper is expected Bring familiarity in a student about Indian society. It will present a Comprehensive, integrated and empirically –based Profile of Indian Society. It is hoped that the structure and processes operative in the society, the change agents operating in Indian society Presented in this Course will also enable students to gain a better understanding of their own situation and region.

Crime and Society Social Research Method, Contemporary Indian Society

• Classical View about Indian Society: Verna, karma, Ashram, Dharma and Purusharth

• The Structure and Composition of Indian Society: Structure: Village, Town. Cities. Urban- Rural Linkage Composition: Tribe, Dalit.

Women & Minorities.

• Basic Institution of Indian Society: Caste System, Joint Family. Marriage and changing dimensions

• Familial Problems: Dowry, Domestic Violence, Divorce, Intra-Intergenerational conflicts, Problem of elderly

• Social Problems: Surrogated motherhood, Live in Relationship, Regionalism, Communalism, Corruption, Youth Unrest Sociology of Tribal society

The concept of tribe Characteristic of Tribal Society, Distinction of Tribe and caste

• Classification of Tribal peoples Food gatherers and hunters, Shifting cultivates, Nomads, Peasants, settled Agriculturist, Artisans,

• Socio -cultural Profile: Kinship, Marriage and Family, Religions beliefs Cultural traditions

• Social Mobility and change sensitization, Scheme of Tribal Development, Various Tribal Movement Problems of Tribal People: Poverty Illiteracy, Indebtedness, agrarian issues, exploitation study of tribal immunities in Chhattisgarh with special reference to “Oraon” “Kanwar” and “Gond”.

B.A. Political Science

Political Theory Course Outcomes: Theory is the starting point of any social sciences that is why political theory is almost universal

• Fundamental theories of political science.

• Basic Knowledge of important concepts such as Liberty, Justice, Citizenship, Representation, rule of law etc .

• Role of political theory to understand political science and political life as well.

Indian Government and Politics.

- Proposed course acquaints the students with values and struggle of national movement. Explains constitutional development as back drop of Indian constitution. This course makes students familiar with knowledge and execution of Indian constitution and political system.
- Explains the values and importance of freedom struggle and constitutional development in the making of Indian constitution and evolution of our democratic system and substantive democracy.
- outcome is related to the basic features, fundamental rights, directive principles of state and amendment process of the constitution.
- Explains the constitutional provisions and functioning of union executive and legislature.
- Explains the constitutional plan of Judicial system of the country and state executive.

- Explains very vibrant topics. From State legislature to election commission of India. It also explains executional outcomes of electoral democratic process like caste politics interaction, communalism etc.

Political Science II - Western Political Thought

- Political philosophy is base of political science. All concepts discourse and ideologies come from the classics of political masters from Socrates Marx and recent times. Therefore purpose of this course to acquaints the students to the political philosophers and their political philosophies.
- Explains the ancient political philosophy given by founding fathers of political thought great Plato and Aristotle.
- This unit makes students familiar to modern age of political philosophy. Emergence of nation state and sovereignty in Machiavelli and Hobes philosophy. Emergence of individualism and liberalism in Hobbes and John Lock's philosophy. Social contract theory.
- Explains the emergence of utilitarianism, Idealism and Marxism through their respective philosophers. Negative and positive liberty of Mill and Green, idealism of Kant and Hegel and Scientific Socialism of Marx.
- Explains the political philosophy of ancient India and modern Indian thinkers. State and individual, role of state, from ancient India and socio-political thought Gandhi and Ambedkar.

Comparative Government & Politics:

- Comparative analysis is old but comparative politics is politics science of 20th century . Therefore, this course focus on

• Emergence of scientific and empirical study in late 19th and early 20th century in political science.

• Contribution of David Easton and Almond for developing new approaches and theories like system approach.

Different types of governance and their comparative study. America as presidential form , UK as parliamentary form, Switzerland as plural form and China as totalitarian form .

- Explains the major provisions of constitution of America.
- Explains the major provisions of constitution of Britain.
- Explains the major provisions of constitution of Switzerland.
- Explains the major provisions of constitution of China.
- Learning outcome of this unit is related to the basic knowledge of scientific and interdisciplinary study advocated by David Easton and his colleagues. Behavioural revolution and system approach.

International Politics The objectives of the course are:

• To acquaints the students to the basics of international politics.

• To provide students the knowledge of theories of international politics

• To provide students the knowledge of foreign policy and issues related to it's execution.

- Explains the concept and approaches of international politics.
- The theoretical aspects of foreign policy execution of international politics like concepts of power, balance of power, diplomacy, disarmament etc .
- Brings the political aspects of environmentalism, globalisation, and human rights.

Public Administration

- Public Administration is new subject, only a century and few decades old. It is related to the welfare role of state. That is why it deals the problems and expertise related to the policy formation and execution. The course has main objective to make familiar to the students to basic concepts of theoretical and practical aspects of public administration.
- The knowledge of basic Concept and approaches of public administration.
- Provides the knowledge of theoretical aspects of public administration like theories of organisation and management.
- Provides the knowledge of practical part of public administration like bureaucracy, budget administration and control over administration.

B.A. Psychology

PROGRAMME OUTCOMES

The main mission of the U.G. degree program is to provide a course of study that reflects both breadth and depth in the field of psychology. The department of psychology set up the following outcomes for Under Graduate program.

These outcomes represent the department's vision of the knowledge, understanding and skills that psychology students achieve by way of graduation.

- Understand the emotion, behavior and feelings of others along with our self.
- Understand the different mental processes of human being.
- Understand the different fields and scope of psychology.
- Convey key concept and the academic and theoretical approach in different ways of psychological science.
- Use psychological principles to generate solutions to personal, social, organizational and societal problems.
- Understand the practical importance, application of the concepts of psychology.
- To develop skills for management of stress.
- To develop an empathetic outlook towards other people and their surroundings.
- Be aware of and execute ethical principles.

COURSE OUTCOME

SEMESTER I : BASIC PSYCHOLOGICAL PROCESS

- Understand the different psychological processes such as memory, learning, problem solving, decision making, reasoning, creativity etc.
- Students are sensitized towards the basic concepts of psychology.
- Students learn how psychology is used in their day to day living.
- Making familiar with the foundations of Psychology.
- Acquaintance with states of consciousness.

SEMESTER II: PSYCHOPATHOLOGY

- Knowing about the nature, types and perspectives of Anxiety and disorders of childhood and adolescence.
- Students gain an insight into various psychological problems.
- Understand symptoms of psychological disorder.
- To Diagnose Mental health Disorders.
- Illustration of mental disorder.

SEMESTER III: SOCIAL PSYCHOLOGY

- Understand the social behavior and social process.
- Understand the social perception of individual.
- To Study the Interpersonal Attraction , social interaction .
- Understand the psychological climate of the society.

SEMESTER IV: PSYCHOLOGICAL ASSESSEMENT

- Understand the use of psychological test and application of different test in different psychological construct.
- Enable students to measure attitude, aptitude, interest, adjustment, skills etc. within the people.
- Understanding the nature and other description of intelligence test, ability tests and personality tests.

SEMESTER V : HUMAN DEVELOPMENT

- Understand the beginning process of life.
- Knowledge about the Prenatal, Infancy and childhood developmental Processes and factors affecting development.

- Understand the development processes of Adolescence, early adulthood, Middle adulthood and Late adulthood.

SEMESTER VI : PSYCHOLOGICAL STATISTICS

- To provide students with excellent and rigorous training in psychological statistics.
- Understanding various statistical analysis techniques (Mean, Mode, Median, Range, Standard Deviation, Karl person coefficient of correlation).

B.A. Sanskrit

• The Syllabi designed for B.A. Program is intended to trains the imagination and capacity to think critically and creatively about the world and their own country through the study of poetry, prose, dramatic, linguistics, narratology, and aesthetics in Malayalam Language and Literature.

• B.A. Sanskrit program tries to make the student community to study Post-Colonial Theories of Literature as well as Cultural Studies, World Poetry, Epistemology, Sanskrit Language and Literature, and Eco-Criticism. In the First-Year student sample a wide variety of literature and cultural theory and develop a solid basis of knowledge and skill which they then build on in years of two and three.

• The varied fact in curriculum encourage engagement with significant range of literacy non-literacy genres, including firm, theatre and popular art form which may lead our students towards universal concept. The character making and responsibility making syllabi develops student power of critically or analytical thinking alongside and appreciation of crafting of written utterances and enabling them to carry the quality of response into future reading.

• The program employs a variety of forms of assessment and includes unseen and revealed written course work essay, seminars, workshops, research reports, oral presentations. So the program can develop skill for employment future study both discipline related and transformable.

Course Outcomes –

Drama, grammar and translation

- Swapnavasvadatam is the famous work of Sanskrit literature. Through this, students will be able to understand the ancient theatrical tradition of India. The play is written in simple Sahaj Pranjal language which will make students successful in understanding Sanskrit. The interpretation of swapnavasvadtam will help students to understand and learn Sanskrit language. In the pupils Knowledge of Indian moral values and building sublime character
- Swapnavasavadatam Review Question In the critical questions the students have knowledge of the diverse sides of the epic in which they acquire knowledge of the different dimensions of the play in which poetic introduction, poet introduction characterization nature illustration adornments get knowledge of Bodhan power is developed.
- A word- form - The knowledge of the word form develops the ability of Sanskrit sentence building in students so that students can make sentence building language can understand literature easily.

- B. The knowledge of metal diseases gives knowledge of the actions of Sanskrit so that students build sentences, understand the texts of Sanskrit, it is easy to read the reading of Sanskrit literature.
- Questions Based on the Passage Reading. This makes the students answer the poem questions by reading the unread passages it develops the language logic power increases the language scrapes in sentence formation Sanskrit gets proficiency in sentence formation.
- Pratyahar Noun Treaty Inflection Meaning Knowledge of grammar in Sanskrit is obtained through pratyahar in the initial form only through pratyahar. In Sanskrit grammar the noun case has special significance Sanskrit grammar can be understood only by the knowledge of the noun through the noun he will be able to understand the whole grammar called ashtadhyay.
- Hindi to Sanskrit Translation Translation from Hindi language to Sanskrit language instills interest in Sanskrit among students. students acquire proficiency in translating from Golden Hindi translation to Sanskrit.

Mattress Fiction & Literature History

- Shuknasopadesh Interpretation Shuknasopadesh is a very preachy aashakti mattress treatise for the pupils in which they are told about the various problems they face in life.
- Interests Mitra Benefits In this book, students and students learn important gnanpur in life through stories under which policy education etc. Indian ancient knowledge acquires two, it develops moral values and practical knowledge.
- Shuknasopadesh and hitopadesh review questions are asked under which students and students are able to review the treatise in which stories and sermons Kartar poets can understand topics like introduction and characterization.
- In this, students and students will be able to understand Vedic Sanskrit literature well and will be able to know mythological literature by reading it under vedangs, teachers will also get introduction about grammar free astrology, students and students will also be able to know about Aranyak and Upanishads.
- Poet Introduction In this section students and students are introduced to the famous poets of Sanskrit literature in which they read about the great poets Mahakavi Kalidas Mahakavi Bharavi Mahakavi Magh Mahakavi harsh visakhadatta and Banabhatta etc.

Drama Grammar and Composition Drama Naganand.

- This section features harshcharit Natak Nagananda, a famous play of Sanskrit literature in which students will be able to understand simple Sanskrit and develop their language skills.
- Naganand Critical questions In this section students and students will study Naganand drama under which they are imparted knowledge of different dimensions of drama. In this, students and students understand the Ras Alankar kathasar characterization poet introduction of the play.
- Grammar Kartruvachya Karm Vachya And Bhavavachya In Sanskrit, syntax is an important part of the students and students are taught reading in this section, under which they get knowledge of different types of sentence usage which develops their language skills and enable them to understand Sanskrit literature well.

- Samas Case In Sanskrit, society is of great importance. understanding the Samas helps students and students to understand the texts of Sanskrit literature. knowledge of the society improves their language skills.
- Vakya rachna Under this, students and students have to construct Sanskrit sentences under which students and students learn to construct sentences based on Sanskrit words, thereby developing Sanskrit sentence building skills in them.

Verse and literary history

- Raghuvansh Epic II Canto In this section, students get acquainted with the epic Raghuvansh of Mahakavi Kalidas , which describes the 29 Kings of Raghuvansh through which students get to know the tradition of Maha poetry.
- Raghuvansh Epic Under this, students gain knowledge of the various parts of the epic under which the characteristics of the epic Ras Alankar poetry introduction poet introduction characterization learn.
- Ethics in this section students study the shlokas of the policy Century written by bharatari in which they are taught the ideal and ethical terms, thereby developing moral values among the students.
- Literary History Epic & Prose Poetry In this section students learn about the history of epic and prose poetry in which students study the various parts of the epic and get an introduction to them like Raghuvansh kumarasambhava buddhacharita. Under prose poetry ten Kumar Charit Kadambari know prose poetry like Shivraj Vijay.
- Literature History Poetry Free And Fiction Under this, students know about various lyricism in which they can understand the different dimensions of Sanskrit poetry world ,read famous works like Bhartrihari's century, season nawawad century, geetgovind, students get knowledge of various fiction literature of Sanskrit literature.

Drama, Verses, and Grammar

- Knowledge Shakuntalam In this, the students read the shakuntal play of Mahakavi Kalidas, which gives them knowledge of the famous creation of Indian theatrical tradition.
- Reviews In this, shakuntal is studied critically so that the students gain good knowledge of the topics mentioned in poetry, develop logic power, understand poetry introduction and poet introduction well.
- The verses of the symptoms in students and students of Sanskrit in various verses of the knowledge provided is Which into intra such as the verses of the reading-reading plan from them Sanskrit picturesqueness and suavity is the realization of the verses sort the GA will be able to and he's poetry is well understood back.
- Grammar Short Theory Kaumudi In this section, students study various suffixes such as tavyat aneer Yat students develop the ability of Sanskrit speech writing and syntax.
- Grammar Short Theory Kaumudi Fixed Case and Female Suffix .In this section, the knowledge of the mentioned words is imparted so that they understand the nature and suffixes of the Sanskrit language, get acquainted with the nature of the words and understand the nature of Sanskrit word formation.

Poetry & essay

- Kiratarjuniya First serg In this, students know about the kiratarjuniyam epic which is said to be famous for Artha gauram. They read kiratarjuniyam, a famous work for arthgambhasabh, which gives students the knowledge of the characteristic of Sanskrit meaning gandhasabh.
- Reviews In this Section, A Critical Study of kiratarjuniyam is carried out, which helps the students to learn the poetic characteristics of the girls and to gain knowledge of the various dimensions of the epic.
- Original Ramayana Adi Kriti Mool Ramayana study of Valmiki ji and cosmic Sanskrit develops the tendency of teaching Sanskrit Studies in Sanskrit students.
- Decking Under this, the students acquire knowledge of various Sanskrit adornments through Sanskrit texts which makes them easy to understand the literature in which they study the characteristics and examples of the adornments.
- Essay In this, students learn the writing of Sanskrit essays, they are taught to write essays on various important topics so that they are proficient in Sanskrit reading, writing and communication.

B.A. English

Programme Outcome

- To foster the intellectual development of the students by encouraging study of Literature.
- To familiarize students with a wide range of works of British writers in particular and the World Literature in general with a special focus on Indian writings in English.
- The department wishes that each student who graduates with a B>A> in English Literature will have an enduring interest in language and literature.

Course outcome

Semester I- Poetry

- To get the students familiarized with major literary poetry by the British poets like William Shakespeare, John Milton, John Donne, John Dryden, William Collins, Oliver Goldsmith, William Blake, and P.B.Shelley.
- To get knowledge of different literary terms related to poetry.

Semester II – Prose

- To enable the students to help in understanding and appreciating literary texts and developing skills in literary analysis.
- To get the students familiarized with major literary essays by the British writers like Francis Bacon, Addison, Steele, Lamb, Lucas, and Gardiner.
- To get the knowledge of different literary terms related to prose.

Semester III - Drama

- To enable the students to understand an analyze various aspects of drama.
- To get the students familiarized with major plays by the great writers like William Shakespeare, J.M.Synge, H.H.Munro.
- To get the knowledge of different literary terms related to Drama.

Semester IV – Fiction and short stories, American Literature, History of English Literature.

- Elective I - To enable the student to understand the different forms of fiction and short stories in English Literature.
- Elective II – To enable the student to understand the different genres of American Literature.
- Elective III – To get the students familiar with historical, political, cultural, Literary , and intellectual background of different ages.

Semester V – Contemporary Literature

- To introduce and foster a understanding of the Contemporary Literature written after the World War II through the present day.
- To get the knowledge of society's social and political viewpoints and socio- economic messages.

Semester VI – Indian Writings in English

- To introduce and foster an understanding of the foundational texts of Indian English Literature and facilitate the comprehension of the historical and cultural range of Indian Writings in English.

B.A. Geography

Programme Outcome

1. Students can familiarize with the geographical facts of earth surface.

2. Student can understand the latest concept of physical geography, geomorphology, and human and environment relationship.

3. Study of skill development programme helps to grow the competence in the students.

4. It provides a knowledge of various subjects so that students may be able to get basic jobs.

5. After completion of the UG programme students have minimum qualification for appearing in various competitive examinations.

Course Outcome –

Semester I: Physical Geography

This is the introductory semester for student. The paper taught in this semester gives the knowledge of physical properties of the earth surface as it is the basic concept of the geography to acquire the knowledge of Hydrosphere, Lithosphere, and Atmosphere. Student, with the study of this paper familiarize with the understanding of geomorphology with relevance to certin Fundamental concept of earth and land form formation, water, winds, and climatic features of the earth.

Semester II : Human Geography

Students get the knowledge of Man- environment relationship and human capabilities to adopt and modify the environment under its various conditions from primitive lifestyle to modern living.

This course is helpful to identify and understand environment and population in terms of their quality and spatial distribution pattern and to comprehend the contemporary issues facing the global community.

Semester III: Climatology

This course provides an understanding of weather phenomena, dynamics of global climates, generation of climatic information and its application.

Semester IV : Oceanography

Students can identify the facets of oceans, such as evaluation of the ocean, physical, and chemical properties of the sea water, atmospheric and oceanographic circulation.

The study of oceanography helps the students to acquaint with the marine environment, its characteristics, and its impact on coastal economy.

Semester V; Geography of India

The course is framed in such a way the student can understand the comprehensive, integrated and empirically based profile of India with the regional characteristics.

The study of India helps the student for the preparation of competitive examination as most of the questions of GK covers geography of India.

Semester VI: Geography of Chhattisgarh

The regional feature of the state CG a fundamental requirement for the students of CG, as I many of the state level competitive examination, geography of CG is the core subject. Thus, the study of Geography of CG not only connect the students with their local scenario, geographical aspects of various issues of developments but also helpful for them in the preparation of competitive examination.

Semester I/II/III/IV/V/VI: Practical Geography

Student can learn the fundamentals of the surveying, map cartography, and scale.

The era of technology and remote sensing and GIS is the basic tools for the analysis of resource appraisal and many more application. Students get the knowledge of remote sensing technology so that they may be able to get admission for higher studies in the RS-GIS.

B.COM.

Programme outcome

- After completion of three years for bachelors in commerce program students would gain a thorough grounding in the fundamentals of commerce and finance.
- Learners will gain thorough systematic and subject skills within various disciplines of commerce, business, accounting, economics, finance, auditing, and marketing.
- The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the students to face the modern-day challenges in commerce and business.
- The all inclusive outlook of the course offer a number of value based and job oriented courses ensures that students are trained into up-to-date.
- Students will learn relevant managerial accounting career skills, applying both quantitative and qualitative knowledge to their future career in business.
- Learners will acquire the skills like effective communication, decision making, problem solving in day business affairs.

COURSE OUTCOME

Semester I

1. To sum up, objectives of business & its surroundings which affect the business.
2. Demonstrate an appropriate mastery of knowledge, skill and tools of financial accounting.
3. To develop effective business communication skills among the students.
4. Students will be able to demonstrate proficiency in problem solving technique using computer & in-depth knowledge in discipline of computer science.

Semester II

1. To develop Abstract, logical, and critical thinking ability to reflect critically upon their work.
2. To provide a brief idea about the framework of Indian business laws.
3. To acquaint the students with the principles of business economics as are applicable in business.
4. To introduce the students to the basic of accounts and usage of tally for accounting purpose.

Semester III

1. To develop awareness about corporate accounting in conformity with the provisions of companies' act.
2. To gain understanding of students with the basics of principles of management.
3. To help students understand the conceptual framework of cost and management audit.
4. To expose the students to the basic concepts on the tools used in cost accounting.

Semester IV

1. To provide basic knowledge of the provisions of companies Act 1956 and Act 2013, along with relevant case law.

2. To provide exposure to the students to the entrepreneurial culture and industrial growth so as to preparing them to set up and manage their own small units.
3. To develop the ability of creating Web-pages and designing business websites among students.
4. To help students understand the conceptual framework of specialized accounting.

Semester V

1. To enable the students to know the basics of income tax and its applications.
2. To impart the knowledge about the principle and methods of auditing and their applications.
3. To enable the students to know the fundamentals of insurance.
4. To help students understand the conceptual framework of financial management.

Semester VI

1. Aims at Imparting basic knowledge about major indirect taxes levied by central and state government.
2. To provide the students an understanding of the application of accounting techniques for management.
3. To enable the students to know the working of the Indian Money and Banking system.
4. To acquaint the students with the working of financial markets in India.

B.Com.Computer

Programme Outcome

1. Commerce with computer application gives a deeper understanding of both Information Technology and Commerce, thereby enabling the budding graduates to pursue careers in either of the two fast growing areas, viz. IT Industry, Commerce, and Financial Sector.

2. Students will demonstrate that they can present the results of their observations and research in a way that is objective, technically accurate, and legally acceptable. Students will use effective technology appropriately, such as PowerPoint, slides, posters, handouts, and transparencies in oral presentation.

3. The ability to understand, analyze and develop software programs in the areas related to system software, multimedia, web design, application program, database, graphics, and networking for efficient design of technology of varying complexity.

Course Outcome:

Semester I

- To sum up, objectives of business & its surroundings which affect the business.
- Demonstrate an appropriate mastery of knowledge, skill and tools of financial accounting.
- To develop effective business communication skills among the students.
- To enlighten the students to study the technical languages of computers.
- Students will be able to demonstrate proficiency in problem solving technique using computer & in-depth knowledge in discipline of computer science.

Semester II

- To develop Abstract, logical, and critical thinking ability to reflect critically upon their work.

- To provide a brief idea about the framework of Indian business laws.
- To acquaint the students with the principles of business economics as are applicable in business.
- To introduce the students the basic of accounts and usage of tally for accounting purpose.

Semester III

- To develop awareness about corporate accounting in conformity with the provisions of companies' act.
- To gain understanding of students with the basics of principles of management.
- To help students understand the conceptual framework of cost and management audit.
- On successful completion of this course the students should have E-Commerce, E-Market, EDI, Business strategies, etc.
- The paper imparts understanding of the concepts and various application issues of e-business like Internet infrastructure, security over internet, payment systems and various online strategies for E- business.

Semester IV

- To provide basic knowledge of the provisions of companies Act 1956 and Act 2013, along with relevant case law.
- To provide exposure to the students to the entrepreneurial culture and industrial growth so as to preparing them to set up and manage their own small units.
- To develop the ability of creating Web-pages and designing business websites among students.
- To inculcate knowledge of RDBMS concepts.
- To develop the ability of creating Web-pages and designing business websites among students.
- To develop the competence of database management.

Semester V

- To enable the students to know the basics of income tax and its applications.
- To impart the knowledge about the principle and methods of auditing and their applications.
- To enable the students to know the fundamentals of insurance.
- To introduce the concept of visual programming. To introduce GUI programming using Microsoft foundation classes.
- To enable the students to develop programs and simple application using Visual C++.
- To enable students to create a software package using VB.

Semester VI

- Aims at Imparting basic knowledge about major indirect taxes levied by central and state government.
- To provide the students an understanding of the application of accounting techniques for management.
- To enable the students to know the working of the Indian Money and Banking system.
- To inculcate the knowledge on computer-based information system MIS support for the functions of management.
- To appreciate the role of and importance if information systems in an organization and at the level of decision making. To understand the elements, functional relationships between the hardware, software, and other elements comprising the information system.
- To make students aware about information system concepts and features.

M.COM.

PROGRAMME OUTCOME

- The students should possess the knowledge, skills and attitudes during the end of the M.Com. degree course. By virtue of the training and curriculum, they can become an Accountant, Managers, Cost Accountants, Auditors, Teachers, Stock Agents, Government jobs etc.
- This program could provide well trained professionals for the Industries, Banking, Insurance Companies, Financing Companies, Logistics, Distribution Channel Management, Application of Information technology in Business, Alternative investment management Technique etc., to meet the well trained Man Power requirements.
- The graduates will get hands on experience in various aspects acquiring skills for Marketing Manager, Sales Manager, Bank Manager, Cost Accountant, Academicians, Project management, Research Analysts, and overall Administration abilities of the company.

COURSE OUTCOME

Semester I

- This course develops managerial prospective to economic fundamental as aid to decision making under given environmental constraints.
- To help student under the conceptual framework f management and organizational behavior.
- To acquaint students with the accounting concept, tools and technique for managerial decision.
- To expose students to advance accounting issues and practices such as maintenance of company accounts, valuation of goodwill and shares and handling accounting adjustment.
- To provide knowledge of relevant provisions of various laws influencing business.

Semester II

- This subject develops managerial prospective to economic fundamentals as aids to decision making under given environmental constraints.
- To help students understand the conceptual framework of management and organizational behavior.
- To help acquaint students with the accounting concepts, tools, techniques for managerial decision.
- To expose students to advanced accounting issues and practices such as maintenance of company accounts, valuation of goodwill and shares and handling accounting adjustments.
- To give students practical knowledge of filling various banking forms and opening of D-mat A/C. online banking transactions and related aspects.

Semester III

- This course aims at providing students with an understanding of the structure organization and working financial market and institution in India.
- To enable students, learn the process and issues relating to preparation, appraisal, review and monitoring of project.
- To help students understand various issues in security analysis and portfolio management.
- The objective of this course is to make the students learn the application of statistical tools, techniques for decision making.
- To provide an understanding of computers, computer operating system and application of relevant software min managerial decision.

Semester IV

- This course aims at providing students with an understanding of structure of organization and working of financial market and institutions in India.

- To enable students, learn the process and issues relating to preparation, appraisal, review and monitoring of projects.
- To make students learn the application of statistical tools techniques for decision making.
- To acquaint the students with the research and methodology of research in the field of commerce and Management.
- To make students to do research in the field of Commerce & Management and make a report.

M.Sc. CHEMISTRY

Programme Outcome

PG – I, II, III, IV Semester

- To understand the basic concepts of all four branches (Inorganic, Organic, Physical, Analytical) of chemistry and also environmental chemistry, medicinal chemistry, biochemistry, spectroscopy, photochemistry.
- To understand the theoretical, principles and conclusion of experimental findings and an ability to analyze the data interpret the result.
- An ability to use modern instrumentation for various chemical analyses.
- To develop critical thinking and efficient problem-solving skills in all four basic areas of chemistry.
- Excursion tour had been arranged every year for enhancement of knowledge of field area and also for placement in industries.
-

Course Outcome

Semester- I

Paper I- Inorganic Chemistry

- To understand Stereochemistry and bonding in main group compounds, Metal ligand bonding, Electronic spectra of complexes, Symmetry and group theory in chemistry.

Paper II- Organic Chemistry

- To understand Reaction mechanism, Reaction intermediates, Stereochemistry, Pericyclic reactions, Molecular rearrangement.

Paper III- Physical Chemistry

- To understand Quantum chemistry, Classical thermodynamics, Chemical dynamics, Surface chemistry and Electrochemistry.

Paper IV- Spectroscopy and Mathematics/Biology for chemistry

- To understand Microwave, Infrared, Raman spectroscopy, Vector, Matrix, Differential Calculations, Permutations and Probability, (For Bio Students) Cell structure function, Carbohydrates, Lipids, Amino acids, Peptides and Nucleic acid.

Semester-II

Paper I- Inorganic chemistry

- To understand the Metal legend equilibria, Reaction mechanism of transition Metal complexes, Metal π-complexes, Metal cluster, Isopoly and Heteropoly acid and salt.

Paper II- Organic chemistry

- To understand Electrophonic and Nuleophilic substitution reaction, Free radical reactions and Addition reaction, Elimination reactions.

Paper III- Physical chemistry

- To understand Quantum chemistry, Thermodynamics, Non-equilibrium thermodynamics, Chemical dynamics, Surface chemistry.

Paper IV- Spectroscopy, Diffraction Methods & Computer for Chemists

- To understand Electronic, Magnetic resonance spectroscopy, X-ray diffraction, Introduction of Computer and Computer Programming in "C", Programming in Chemistry and Use of Computer programmes.

Semester-III

Paper I- Application of spectroscopy

- To understand Vibrational, Electron spin resonance, Nuclear magnetic resonance of paramagnetic substances of inorganic chemistry, Ultraviolet & visible, Infra-Red, Nuclear magnetic resonance, Carbon-13 NMR, Mass spectroscopy of organic chemistry.

Paper II- Bio-Inorganic & Bio-Physical Chemistry

- To understand Sodium/Potassium pump, Bioenergetics and ATP cycle, Translate and Storage of Dioxygen, Electron transfer in biology, Nitrogenase, Calcium in biology of Bio-inorganic chemistry.
  Biological cell and its constituents, Bio-energetics, Statistical mechanics in biopolymers, Biopolymer interaction of Bio-physical chemistry.

Paper III- Environmental Chemistry

- To understand Environment, Hydrosphere, Atmosphere, Industrial pollution, Environmental Toxicology.

Paper IV-Chemistry of Heterocyclic Compounds

- To understand Nomenclature of Heterocycles, Aromatic & Non-aromatic Heterocycles, Heterocyclic synthesis, Small ring & Benzo-fused five membered Heterocycles, Six membered Heterocycles with one, two & more Hetero atoms, Seven & Large membered Heterocycles of organic chemistry.
  Rate of chemical reactions, Kinetics of complex reactions, Kinetic study in Liquid solution, Diffusion controlled reaction, Reaction on surface & solid state, Dynamics of electron transfer reactions, Reaction in solid state heterogeneous system, Measurement of rate of a chemical reaction of Physical chemistry.

Semester-IV

Paper I-Photochemistry & Solid State Chemistry

- To understand Photochemical reaction, Determination of Reaction mechanism, Photochemistry of Alkenes, Photochemistry of Carbonyl & Aromatic compounds, Miscellaneous photochemical reactions of photochemistry.
  Solid state reactions, Crystal defects & Non-stoichiometry, Electronic properties & Band theory of Solid state chemistry.

Paper II-Bio-organic & Bio-physical chemistry

- To understand Enzyme, Mechanism of Enzyme action, Co-enzyme chemistry, Metalloenzyme, Biotechnical application of Enzyme of Bio-inorganic chemistry.
  Thermodynamics of Biopolymer solutions, Cell membrane and transport of ions, Biopolymers & their molecular weight, Diffraction Method of Bio-Physical chemistry.

Paper III-Medicinal chemistry

- To understand Pharmacokinetics, Antineoplastic agents, cardiovascular drugs, Local Anti-infective drugs, Psychoactive drugs the chemotherapy of mind, Structure & Synthesis of Antibiotics.

Paper IV-Organic Chemistry

- To understand Terpenoids, Carotenoids, Alkaloids, Steroids & Non-steroid Harmones, Plant pigment, Porphyrins of Chemistry of Natural product.
  Introduction, Errors & Evaluation, Food Analysis, Analysis of water pollution, Analysis of Soil, Fuel, Body fluids, Drugs of Analytical Chemistry.

M.Sc. Mathematics

Program Outcome

- There is a greater chance of self-employment and variety of career opportunities like analyst, teaching, banking sector etc.
- Students can pursue research in mathematics and also in interdisciplinary subjects.
- There is an opportunity to fulfill academic hunger.

Course Outcome

Semester I

Paper I – Advanced Abstract Algebra-I

- In Abstract Algebra, a composition series provides a way to breakup and algebraic structures that is group or a module into simple pieces.
- Modules are very closely related to the Representation theory of groups and are used widely in algebraic geometry and algebraic topology.
- Field theory widely used in Algebra, number theory and many cryptographic Protocols.

Paper II – Real Analysis -I

- Riemann Stieltjies Integral serves as an instructive and useful procedure of the living integral for the students and also, they used it for discrete and continuous probability.
- Power series are useful tools that can be used to expand other functions solve equation and applied in all areas of engineering.
- In the mathematical field of analysis, uniform convergence of convergence is a mode of functions stronger than point wise convergence.

Paper III – Topology -I

- This paper gives the basic idea of topology and it serves as a foundation for future for future study in Analysis, geometry, fuzzy topology, algebraic topology etc.
- Continuity of function is of core concept of topology. Topology finds applications in Physics, Economics, Networking, Computer Science and many other branches of knowledge.

Paper IV - Complex Analysis-I

After completing the course students will be able to

- Carry out computations with the complex exponential, logarithm and root functions and know their definition.
- Calculate the image of circle and lines under mobius transformation.
- Find the harmonic conjugate to harmonic function.
- Express analytical function in terms of power series and Laurent’s series Taylor series.
- Calculate Complex line integrals and some infinite real integral using Cauchy's Residue theorem (contour integral).
- Find the number of zeros and poles within a given curve using argument principle,Rouche’s theorem.

- Work with multivalued function.

Paper V – Advanced Discrete mathematics-I

- Boolean algebra is used to analyse and simplify the digital circuits. Boolean algebra also used to the design of switching circuits.
- Lattice theory is the use of Boolean algebras in modelling and simplified switching circuits.
- The study of computability theory in computer science is closely related to the study of computability in mathematical logics.
- Descriptive complexity theory relates logics to computational complexity.

Semester II

Paper-1 Advanced Abstract Algebra-II

- Noetherian and Artinian modules and rings are generalized finiteness conditions. Noetherian conditions prevents chains from piling up too much and artinian condition prevent them from infinitely shrinking.
- Smith normal form is useful in topology to compute the homology of a simplicial complex and also used in control them to compute transmission and blocking zeros of a transfer function matrix.
- In the field of abstract algebra, structure theorem for finitely generated modulus over PID is generalization of Fundamental Theorem of finitely generated abelian groups. It provides simple framework to understand various Canonical form results for square matrices over fields.

Paper II- Real Analysis-II

- Lebesgue spaces are used in the theoretical discussion of problems in Physics ,Statistics ,Finance, Engineering and other disciplines.
- L^P space used to derive from the fact that they offer a partial but useful generalization of the fundamental L^2 space of square integrable function.
- Function of bounded variation are used to define generalization solution of nonlinear problems involving functional, ordinary and partial differential equation in mathematics, Physics and engineering.

Paper III – Topology -II

- The topic dealt in this paper serve as a foundation to facilitate students for research work in various branches of science.

Paper IV - Complex analysis-II

- The students should learn the basic techniques of contemporary Complex Analysis in various applications such as harmonic analysis differential equations as well as in the applied disciplines.
- formation of entire function with the help of watercress theorem, Rhungi and Mittag Leffler's theorem.

- analytic continuation along a path and curve.
- understand Green's theorem, which help to solve differential equations.
- able to find the order and rank of entire function exponent of convergence.
- learn the range of analytic function.

Paper V – Advanced Discrete Mathematics-II

- Graph theory used in modeling transport networks activity networks and theory of games.
- Graphs can be used to model many types of relations and process in physical, biological, social and information system.
- Graphs are used to represent networks of communication, data organization, computational device, the flow of computation etc.
- In computer science, finite state machines are widely used in modeling of application behavior, design of hardware digital system, software engineering, compilers, network protocols and the study of computational and languages.

Semester III

Paper I - Integration theory and Functional analysis-I

- Raydon Nikodym theorem can be used to prove the existence of conditional expectation for probability measures.
- Borel set are used in descriptive set theory.
- Baire measures are convenient framework for integration on locally compact Harsdorf space.

Paper II - PDE, Mechanics & Gravitation-I

- its widely used in formulating many fundamental law of Physics and Chemistry.
- gain the vast knowledge by using the application of Calculus of variation in biological and medical field.
- develop the skill while doing using the various problem by using integral equation in all engineering sciences.
- demonstrate their understanding of how physical phenomenon Are modeled by differential equation.
- be familiar with the Modelling assumption and derivation that lead to p d e .
- Be competent is solving linear PDE using classical solution method.
- find the Fourier and Laplace transformation its application.
- solve boundary value problem using Fourier and LaPlace transform.

Paper III – Programming in C (with ANSI Features)-I

- ✓ Understand the fundamental programming concepts and methodologies which are essential to create good C programs.
- ✓ Code, test, and implement a well-structured, robust computer program using the C programming language.
- ✓ Write reusable modules (collections of functions).

- ✓ Understand design/implementation issues involved with variable allocation and binding, control flow, types, subroutines, parameter passing.

Paper IV – Fuzzy Sets and their applications-I

This paper gives an introductory idea of fuzzy sets and basic properties of fuzzy sets. This property has been introduced so that a student can fuzzify all the concepts of a crisp set. this paper acts as a tool for serving all types of research concerned with fuzzy sets.

Paper V - Operations research-I

- Operations research utilized in allocation and distribution in project and production and facility planning, in marketing, in finance sector etc.
- Network analysis used in construction projects based on the knowledge and experience of the past project for predicting accurately the time required for various activities during execution of project.
- Application of dual simplex method is that it works even when values are zero, easily implemented to solve any type of transportation problem.
- Assignment problem does the allocation in such a way that cost or time involved in process is minimum and profit or sale is maximum.

Semester IV

Paper I -Integration theory and Functional analysis-II

- Hilbert space are used and functional analysis in quantum mechanics. Hilbert space support generalization of simple geometric concept like projection and change of basis from their usual finite-dimensional setting.
- Banach space allow us to transfer variable between the domain and codomain.
- Inner product space can be used to define Fourier coefficient for the series and that gives us a wide range of applications in boundary value problem (mainly heat and wave equation).

Paper II –PDE, Mechanics & Gravitation-II

- have a deep understanding of Newton's Law.
- to solve statistical mechanics problems.
- familiar with experimental techniques used in elementary practical physics.
- to understand the discipline specific knowledge in classical mechanics that is concept and Newton's law and application oscillation, Lagrange’s equivalent.
- to solve problem in Applied Physics.
- understand the Lagrange's and Hamiltonian approach in classical mechanics.
- get familiarized with Poisson and Lagrange's brackets and Hamilton Jacobi equations.
- kinematics and dynamics of right body in detail and ideas regarding Euler's equations.
- To apply calculus of variation to diverse problems in physics including isoperimetric problems, use of LaGrange multiplier in solving physics problems.

Paper –III Programming in C (with ANSI Features)-II

- ✓ Understand the fundamental programming concepts and Operators, expressions to create good C programs.
- ✓ Understand the fundamental aspects of array to store data by using the C programming language.
- ✓ Understand structures and union concept for manage and storing different type of data items.
- ✓ Write reusable modules (collections of functions).
- ✓ Understand design/implementation issues involved with variable allocation and binding, control flow, types, subroutines, parameter passing.
- ✓ To learn how to passing parameters in the functions of the C program.

Paper IV – Fuzzy Sets and their applications-II

- In this paper students study the most successful application areas of fuzzy system called fuzzy control which finds extensive use in neural network.
- Decision making in fuzzy environment helps in how decisions are made involving single decision maker or multi decision makers. Students also learn fuzzy measure theory, probability theory, evidence theory which are used to characterize the various forms of uncertainty Students after attaining knowledge of fuzzy sets can apply her knowledge in research work in the field of medicine, economics, science and engineering, neural network and so on.

Paper V - Operations research-II

- Dynamic programming used in computer network, routing, graph problems, computer vision, artificial intelligence, machine learning etc.
- Valuable applications of queuing theory are traffic flow (vehicles, aircraft, people Communications, scheduling and facility design etc.). Queuing theory applicable to healthcare settings where system have excess capacity to accommodate random variation.
- Nonlinear programming is the field of mathematical Optimization that deals with problem that are not linear.
- Game Theory is applied for determining different strategies in the business world.

M.Sc. ZOOLOGY

Programme Outcome

After completion of the P G program, the students will able to

1. Understand the scientific terms, concepts, facts, phenomenon and their interrelationships
2. Understand systemic position and organization of animals through study of classification in depth. With the understanding of evolutionary processes
3. Understanding of life process and its implementation in real life situations
4. Understanding of biological principles at molecular levels
5. Develop skills and abilities in practical work, handling instruments in laboratory experiments

Course Outcome

Semester – I

Paper – I Structure and Function In Invertebrates

- Structure and Function in Invertebrates – To understand systematic position of invertebrate.
  Detail study of invertebrate architecture and its impact on function.
  Larval forms in invertebrate and their phylogenic significance.

Paper – II Biosystematics & Taxonomy

- Biosystematics and Taxonomy - To understand systematic position of animals on natural scale (scale nature) principles and practice of taxonomy
- Theories of Zoological classification, Species concept

Paper – III General and Comparative Endocrinology

- General and Comparative Endocrinology- Detailed study of endocrine system, mode of hormone action, biosynthesis, effect on metabolism
- Reproduction endocrine control of it, growth and development

Paper – IV Molecular Cell Biology

- Molecular Cell Biology- To understand cellular mechanisms at molecular level
- Cell adhesion and communication
- Cell organelles, Morphological and functional elements of Eukaryotic chromosome

Semester - II

Paper – I Morphology & Physiology of Insects

- Morphology and Physiology of Insects -To study diversity of insects through their classification
- Structure of various organ systems and physiology as most evolved invertebrates

Paper – II Population Genetics and Evolution

- Population Genetics and Evolution- to understand interplay of genetics at population level, its effect on evolution and evolutionary processes
- Role of Genetics in speciation, understanding evolution at molecular levels

Paper – III Animal Behavior

- Animal Behavior- To understand basis of behavior and how the behavioral complexities increased with animal evolution
- Study the Ecological aspect of behavior

Paper – IV Tools and Techniques for Biology

- Tools and Techniques for Biology – To learn modern tools and techniques used in biology and their application in laboratory work specially in research.
- Develop skills and abilities in practical work, handling instruments in laboratory experiments

Semester - III

Paper – I Comparative Anatomy of Vertebrates

- Comparative Anatomy of Vertebrates- To know the vertebrate anatomy to understand serial homology in vertebrate series and to appreciate how structural complexity developed through evolutionary process to cope with environmental condition.

Paper – II Physiology of Vertebrates

- Physiology of Vertebrates – To know the physiological processes in vertebrates as a result can apply the knowledge in day-to-day situation.

Paper – III Quantitative Biology

- Quantitative Biology – The knowledge of biostatistics for the students of biology is must as use of statistical methods in biology is increasing every day. Students apply this knowledge for post graduate as well as research purpose.

Paper – IV Ichthyology

- Ichthyology - To study diversity of Pisces through their classification, structure of various organ systems and physiology as it is a most studied vertebrate.

Semester - IV

Paper – I Gamete Biology & Reproductive Physiology of Human Beings

- Gamete Biology & Reproductive Physiology of Human beings - Structure and development of gametes, modern techniques for preservation of gametes.
- Multiple Ovulation and Embryo Transfer Technology

Paper – II Environmental Physiology

- Environmental Physiology – To understand how animal adopt different physiological strategies to cope various environmental conditions.
- Basic concept of environmental stress and strain

Paper – III Population Ecology

- Population Ecology – organisms never grow alone, therefore basic concepts applicable at population levels is understood, study of Demographic data presentation.
- interaction such as intra-species and inter species is studied in length

Paper – IV Aquaculture & Fisheries

- Aquaculture & Fisheries -to gain knowledge of applied aspect of Ichthyology, Fish culture, prawn culture, pearl culture etc.

Program Specific Outcome

Understand the scientific terms, concepts, facts, phenomenon and their interrelationships, Understand biological processes at structural and functional levels, Understanding life at molecular level.

M.Sc. Botany

Program Outcome

On completing under graduate and post-graduate studies in Botany course, the students will be in position to understand: -

1. Terminology, phenomenon, concepts and classification of plants and its scientific importance.
2. Flora and fauna (Biodiversity) and its importance.
3. Application of botanical knowledge in day-to-day activities of life- cycle.
4. How to develop skills and abilities in handling of instruments during practical works.
5. Application of subject knowledge in day to day uses.
6. How to be in position to take up studies at post-graduate level and to further acquire good jobs.
7. General importance of Botany in day-to-day human and animal life.
8. Develop skills and abilities in practical work, handling instruments in laboratory experiments.
9. Research techniques and knowledge to undertake M.Phil., Ph.D. course after completion of post-Graduation.

Course Outcome

Semester-I

Paper I Molecular Biology &Cytology: -

- To understand cellular mechanism at molecular level. Cytological slide preparation and knowledge to recombinants.

Paper II Biology and Diversity of Micro-Organisms, Algae and Fungi: -

- To study diversity of micro- organisms and thallophytes through their classification. Study and introduction with gram positive and gram-negative bacteria water blooms study, aquatic flora and bio fertilizers.

Paper III Taxonomy and Diversity of Angiosperms: -

- To understand systematic position of phanerogams, classification of angiosperms with their phylogeny. Studies and knowledge of flora in lab and excursion.

Paper IV Plant Biochemistry & Enzymology: -

- To study energy flow, membrane transports enzymology, phytohormones, photochemistry and photosynthesis. Detail study of Chromatographic studies of pigments and soil analytical studies.

Semester-II

Paper Cytology & Genetics: -

- Knowledge of cell cycle and apoptosis classical genetics, genetic interactions and genetics at molecular level.

Paper II Bryophyta & Pteridophyta:-

- Evolutionary studies of Bryophytes and pteridophytes and adaptation, habitat studies.

Paper III Taxonomy& Diversity of Gymnosperms: -

- Detail study of structure and reproduction of gymnosperms, extinct gymnosperms studies.

Paper IV Plant Physiology and Metabolism: -

- To understand transpiration, respiration and nitrogen fixation. Flowering process, sensory photobiology and stress physiology. Chromatography and pigment separation.

Semester-III

Paper I Plant Development & Growth: -

- Knowledge of seed germination and dormancy, root, shoot, leaf development and growth senescence and PCD. Anatomical studies through section cuttings.

Paper II Plant Ecology: -

- To understand soil and vegetation patterns and their organization, climate and climate changes, ecosystem and green revolution. Ecological and dynamical studies of biotic and abiotic components hydro sere and Xerosere. Study in excursion (Visit to Buka and Satrenga dams.)

Paper III Biotechnology & Tissue Culture: -

- To understand biotechnology plant cell and tissue culture, organogenesis and embryogenesis and hybridization. Elementary practical experiment and introduction with pollen culture, callus culture, milk test, hygienic test.

Paper IV Plant Pathology & Physiology of Parasitism: -

- To understand fungal bacterial and viral dishessymptoms their pathogenicity and defense mechanism. Disease eliminating strategies and agricultural utilizations.

Semester-IV

Paper I Embryology & Plant Resources: -

- Structure and development of male and female gametophyte vivo and vitro fertilization, seed and fruit formation. Food, forage, fodder, fiber, medicinal, oil yielding, firewood, timber and NWFPs. Embryological slide preparation, technical aspects collection cereal crops, oil crops.

Paper II Pollution & Conservation of Plant: -

- Knowledge of conservation of nature and strategies of in situ and ex situ conservation. Dynamical and pragmatic uses of statistics and introduction to the forest and water bodies (Satrenga, Bukadams) and dirty water reservoirs.

Paper III Biotechnology & Genetic Engineering: -

- Knowledge of recombinant DNA technology, genetic engineering and microbial genetic manipulation. Wine production and introduction with ethical sociological benefits of biotech. Visit to agriculture lab to observe biotechnological tools.

Paper IV Pathology -Diseases of crop plants: -

- Knowledge of major crop plant diseases and their control. Disease eliminating and innovative ideas for crop improvements.

M.Sc. Physics

Programme Outcome

Physics lies at the core of all scientific and technical disciplines. Our department has a two-fold mission to provide students who will make a wide range of career choices with an outstanding learning experience in which they develop strong analytical, quantitative, and problem -solving skills with a deep appreciation of the role physics plays in technical innovations, and to foster cutting-edge research that expands the horizons of science and technology.

The main mission of the P.G degree program is to understanding of core and advance level knowledge in physics, including the major premises of classical mechanics I & II, quantum

mechanics I & II, electromagnetic theory, application of electronics, communication electronics, digital electronics, nuclear physics, laser physics and microprocessor.

- ✓ Students will demonstrate proficiency in the acquisition of data using a variety of laboratory instruments and in the analysis and interpretation of such data.
- ✓ Students will utilize a wide range of printed and electronic resources and information technologies to support their project on physical systems and present those results in the context of the current understanding of physical phenomena.
- ✓ Students will demonstrate understanding of the applications of numerical techniques for modeling physical systems for which analytical methods are inappropriate or of limited utility.

Course Outcome

SEMESTER -I

PAPER -1 MATHEMATICAL PHYSICS

- ✓ Learn about Gradient, Divergence and Curl in orthogonal curvilinear and their typical applications in physics.
- ✓ Learn about special type of matrices that are relevant in physics and then learn about tensors.
- ✓ Get introduced to Special functions like Gamma function, Beta function, Delta function, Dirac delta function, Bessel functions and their recurrence relations

PAPER _2 CLASSICAL MECHANICS

- ✓ Understand the terminology used in Classical Mechanics.
- ✓ Employ conceptual understanding to make predictions, and then approach the problem mathematically.
- ✓ Understand the important connections between theory and experiment.

PAPER _3 QUANTUM MECHANICS-I

- ✓ Learn the mathematical tools needed to solve quantum mechanics problems.
- ✓ This will include complex functions and Hilbert spaces, and the theory of operator algebra.
- ✓ Solutions of ordinary and partial differential equations that arise in quantum mechanics will also be studied.

PAPER _4 ELECTRONIC DEVICES

- ✓ Utilize the basic knowledge in mathematics, science and engineering in Electronics.
- ✓ Construct, choose and apply the techniques, resources and modern engineering tools required for Electronics.

SEMESTER -II

PAPER _1 ELECTRODYNAMICS AND PLASMA PHYSICS

students have gained a clear understanding of Maxwell's equations and electromagnetic boundary conditions.

- ✓ Know that laws of reflection, refraction are outcomes of electromagnetic boundary conditions. They will also be able design dielectric coatings which act like antireflection coatings. They will be able to distinguish between a good metal and a good dielectric.
- ✓ Have grasped the idea of electromagnetic wave propagation through wave guides and transmission lines.
- ✓ Extend their understanding of special theory of relativity by including the relativistic electrodynamics.
- ✓ Understand the rather complex physical phenomena observed in plasma.

PAPER _2 STATISTICAL MECHANICS

- ✓ Understand how statistics of the microscopic world can be used to explain the thermal Features of the macroscopic world.
- ✓ Be able to use thermal and statistical principles in a wide range of applications.
- ✓ Learn a variety of mathematical and computer techniques.

PAPER -3 QUANTUM MECHANICS-II

- ✓ Approximation methods for time-independent problems like the WKB approximation
- ✓ The variational equation and its application to ground state of the hydrogen and Helium atom and Perturbation theory and Interaction of an atom with the electromagnetic field
- ✓ Relativistic Quantum Mechanics using Dirac equation, Dirac matrices, The Klein Gordon equation etc.
- ✓ Second quantization of the Schrödinger wave field for bosons and fermions

PAPER -4 ATOMIC AND MOLECULAR PHYSICS

- ✓ Apply the mathematical tools developed to various quantum mechanics problems.
- ✓ Develop problem solving methods that will include mathematical as well as Numerical computations and solutions.
- ✓ Build connections between mathematical development and conceptual understanding.

SEMESTER -III

PAPER -1 CONDENSED MATTER PHYSICS

- ✓ Understand basic concepts and mathematical methods of condensed matter physics.
- ✓ Practice problem solving by using selected problems in condensed matter physics.
- ✓ Explore important connections between theory, experiment, and current applications.
- ✓ Develop a basis for future learning and work experience.

PAPER -2 NUCLEAR AND PARTICLE PHYSICS

- ✓ Student have a basic knowledge of nuclear size, shape, binding energy. etc and also the characteristics of nuclear force in detail.
- ✓ Be able to gain knowledge about various nuclear models and potentials associated.
- ✓ Acquire knowledge about nuclear decay processes and their outcomes. Have a wide understanding regarding beta and gamma decay.
- ✓ Grasp knowledge about Nuclear reactions, Fission and Fusion and their characteristic.

PAPER -3 OPERATIONAL AMPLIFIER AND DIGITAL ELECTRONICS

- ✓ Getting familiarized with basic integrated circuit components, its designing &packaging
- ✓ Understanding various operating modes of Op-amp and its linear/non-linear applications
- ✓ Designing of signal generators and low and high order filters
- ✓ Understanding and designing of multi-vibrator and power supply circuits

PAPER -4 ELECTRONICS & IT'S APPLICATION

- ✓ Understand and compare operation principles, characteristics, design architectures and trade-offs of optical detectors and modulators of light.
- ✓ Understand basic system design of fiber optic communication link and fundamental theory of fiber optics.
- ✓ Analyze the difference between the conventional tubes and the microwave tubes for the transmission of the Enweaves.
- ✓ Acquire knowledge about the measurements to be done at microwaves.
- ✓ Acquire complete knowledge about the applications of the microwaves for Radar Communications.

SEMESTER -IV

PAPER -1 Computational Method and Programming

- ✓ Have a strong base in FORTRAN programming, flow chart, integer and floating point arithmetic.
- ✓ Understand method of determination of zero of Equation – iteration, Newton Rap son etc.
- ✓ Gets a wide knowledge of numerical methods in computational Physics that can be used to solve many problems which does not have an analytic solution

PAPER -2 PHYSICS OF LASER AND LASER EQUATION

- ✓ Assess and design of longitudinal and transverse mode of laser cavity
- ✓ Understand the different- different laser system.
- ✓ Understand the various techniques of laser spectroscopes.

PAPER -3 DIGITAL COMMUNICATION

- ✓ Analyze the performance of a baseband and pass band digital communication system in terms of error rate and spectral efficiency.
- ✓ Perform the time and frequency domain analysis of the signals in a digital communication system.
- ✓ Understand the mathematical representation of noise.
- ✓ Know the use of computer communication system in digital communication.

PAPER -4 MICROPROCESSOR

- ✓ Study the Organization and internal architecture of the Intel 8085 and 8086
- ✓ Learn assembly language programming and arithmetic.
- ✓ Aware of Memory interfacing, and different Data transfer schemes,
- ✓ Learn interfacing with peripheral I/O devices.
- ✓ Understand the programming of microprocessor.

M.A. Psychology

PROGRAM OUTCOME

- To provide students with an understanding of human behavior that will support their ability to participate as informed members of the society, and to develop in them an empathetic outlook towards others and their surroundings.
- To provide students with excellent and rigorous training in Psychology both theoretically and practically.
- To build deep expertise in the respective domain as well as a broad.
- Describe the evolution of psychology and the major pioneers in the field.
- Identify the various approaches, fields, and subfields of psychology along with their major concepts and important figures.
- Describe the value of psychology and possible careers paths for those who study psychology.

COURSE OUTCOME

SEMESTER I

PAPER I: ATTENTION AND PERCEPTUAL PROCESS

- Differentiate between sensation and perception.
- Explain the process of vision and how people see color and depth.
- Explain the basics of hearing.
- Describe the basic anatomy and functions of taste, smell, touch, pain, and the vestibular sense.
- Define perception and give examples of gestalt principles and multimodal perception.

PAPER II: SOCIAL PSYCHOLOGY

- Recognize aspects of social psychology, including the fundamental attribution error, biases, social roles, and social norms, in your daily life.
- Describe how attitudes can be changed through cognitive dissonance and persuasion.
- Explain how conformity, obedience, groupthink, social facilitation, social loafing, and altruism relate to group behavior.
- Explain prejudice, discrimination, and aggression.

PAPER III: BASIC RESEARCH METHODOLOGY

- Research Methodology helps to analytical, interpretation and presentation skill among students.
- Research Methodology helps to understand steps and procedure for selection of research problem.

- To study the sampling techniques as a method of data collection, Coding, classification, tabulation, graphical presentation, analysis and interpretation of data.
- Understand the appropriate and systematic method for writing effective research report.
- Define and apply the scientific method to psychology
- Describe the strengths and weaknesses of descriptive, experimental, and co- relational research
- Define basic elements of a statistical investigation

PAPER IV: PSYCHOPATHOLOGY

- Define psychological disorders and also explain how they are classified.
- Describe the features and characteristic symptoms of anxiety disorders, obsessive-compulsive disorder and posttraumatic stress disorder; differentiate these anxiety disorders from each other
- Illustrate the risk factors and major symptoms of unipolar disorder and bipolar disorder.
- Enlighten the symptoms and possible causes of schizophrenic, paranoia, dissociative disorders and other mental disorder.
- Describe the treatment of mental health disorders.
- Identify and explain the basic characteristics of various types of therapy.
- Explain and compare treatment modalities.

SEMESTER II

PAPER I: BASIC PSYCHOLOGICAL PROSSESES

- Explain learning and the process of classical conditioning.
- Explain operant conditioning, reinforcement, and punishment.
- Describe latent learning and observational learning.
- Explain the process of memory.
- Explain and give examples of forgetting and memory failure.
- Recognize and apply memory-enhancing strategies.
- Describe cognition and problem-solving strategies.

PAPER II: GROUP PROCESSES AND CULTURAL PSYCHOLOGY

M.A. Social and Cultural Psychology explores the approaches in which ritual, culture and society shape how human beings assume, behave and relate to each other.

- To understand how societies think, how communities develop a sense of identity.
- To understand how societies represent controversial and important issues affecting general and worldwide community.

- To comprehend how culture affect social behavior of people.
- To recognize the relationship between culture and environment of society.
- To apprehend the way human being behave indifferent social situations, in addition to the way they think about and feel approximately the broader social world, with a focal point on uncovering each proximal and distal factors of such phenomena.

PAPER III: ADVANCED RESEARCH METHODOLOGY

- Elucidate proper applications of statistical analyses for various research designs, issues, or hypotheses.
- Calculate the important statistical technique to solve problems either manually or through SPSS.
- Communicate the meaning of statistical analyses in everyday language and professional formats (e.g., graphs, tables, and words).
- Understand the advance technique of data analysis such as regression, factor analysis, anocova etc.
- To be aware students by the utility of SPSS and make them friendly with SPSS.

PAPER IV: PHYSIOLOGICAL PSYCHOLOGY AND HEALTH BEHAVIOURS

- Identify the basic structures of a neuron, the function of each structure, and how messages travel through the neuron.
- Explain the anatomy of nervous system and the role of the endocrine systems and nervous system on human behavior.
- Enlighten how character, nurture, and epigenetic affects personality and behavior.
- Describe consciousness and biological rhythms.
- Describe what happens to the brain and body during sleep.
- Explain how drugs affect consciousness.

SEMESTER III

PAPER I: PERSONALITY AND INDIGENOUS PSYCHOLOGY

- Define personality and the contributions of Freud and neo-Freudians to personality theory.
- Describe and differentiate between personality theories.
- Explain the use and purpose of common personality tests.

PAPER II: PSYCHOLOGICAL ASSESSEMENT-I

Psychological assessments recommend massive power for clinicians and patients. Psychological assessment is referred to as psychological test or performing a psychological series on a person.

- Understand the use of psychological test and understand the application of different test in different psychological construct.

- Enable students to measure attitude, aptitude, interest, adjustment, skills etc. within the people.

PAPER III: COGNITIVE PSYCHOLOGY-I

- Identify the basic structures of a neuron, the function of each structure, and how messages travel through the neuron.
- Explain the anatomy of nervous system and the role of the endocrine systems and nervous system on human behavior.
- Differentiate between sensation and perception.
- Explain the process of vision and how people see color and depth.
- Explain the basics of hearing.
- Describe the basic anatomy and functions of taste, smell, touch, pain, and the vestibular sense.
- Define perception and give examples of gestalt principles and multimodal perception.

PAPER IV: CLINICAL PSYCHOLOGY AND DIAGNOSIS

This subject of psychology mainly focuses on the assessment, diagnosis, treatment, and prevention of mental disorders.

- To know the different approaches of psychotherapies and how to apply Psychotherapies on people with mental disorder.
- To recognize the clinical symptoms of mental disorder.
- To elucidate diagnosis techniques.
- To understand how to prevent mental disorders.

SEMESTER IV

PAPER I: LIFE SPAN DEVELOPMENT

- To understand how life begins.
- Understanding development processes and pattern of human.
- Understanding the psychological social and cognitive development of adolescence and adult hood

PAPER II: PSYCHOLOGICAL ASSESSEMENT-II

- Understanding the nature and other description of intelligence test, ability tests and personality tests.
- The assessment technique such as interview helps define the current situation/problems and important elements of personal history.

PAPER III: COGNITIVE PSYCHOLOGY-II

- Understanding cognitive abilities: concept formation, decision making, reasoning
- To understand the effect of aging in cognition.

- To understand the effects of situational factors on cognition.

PAPER IV: BASICS OF PSYCHOLOGICAL GUIDANCE, COUNSELLING AND PSYCHOTHERAPEUTIC COUNSELLING

- The course material is intended to provide students' with an understanding of the counselor's roles within evolving practice environments and across the spectrum of the field of counseling Psychology.
- This paper aims to familiarize students with the basic concepts and issues of counseling.
- It provides a comprehensive overview and general understanding of the profession of counseling.
- It aims to promote critical thinking about various issues and debates in counseling psychology.
- To import knowledge to the students n various approaches to counseling.
- To implement at least three therapeutic techniques in each approach.
- To import knowledge on critiquing various approaches and develop skill to use them to diverse populations.
- Knowledge of Counseling Skills, Enhancement in self-awareness, Development of skill in using counseling techniques.

M.A. History

PROGRAMME OUTCOME

- To familiarize the students with Indian Civilization, Culture, Art, Architecture, and Religion of India.
- To prepare the students to understand Administrative and Political decisions and use them in their practical life.
- To understand colonial exploitation and its impact on Indian Economy.
- To understand leading World problems and incidents and their impact on India and other parts of the World.
- To prepare the students to collect, compare, and select appropriate data for historical research and gradually develop research skill.

COURSE OUTCOME

Semester I (Paper I)

- To prepare the students to understand the various aspects and trends of historical Writings, relation of history to other subjects and to compare the historical writing from different backgrounds.

Semester I (Paper II)

- To develop the understanding of ideas like Capitalism, Socialism, Liberalism, Imperialism, and Nationalism.

- To prepare students to understand International Politics and Problems between the two World Wars and efforts to maintain peace and disarmament during Pre and Post World War.

Semester I (Paper III)

- To prepare the students to understand the sources of Modern Indian History and different trends of historiography on Modern India.
- To understand the Imperial Policy of Britain towards India, Relation, and Conflict between British and Contemporary Indian Powers.

Semester I (Paper IV)

- To understand in brief Regional History of Chhattisgarh from Pre - Historic period up to Independence.
- To develop awareness towards their region and its Political, Social, Economic, and Cultural condition.

Semester II (Paper I)

- To familiarize the students with the major theories and subject matter of history.
- To prepare the students to understand the controversial problems in Indian History.

Semester II (Paper II)

- To understand the political condition of the World after World War II. Rise and Development of Communism, Cold War, Non-Align Movement, Regional Problems and Human Rights.
- To understand the role of U.N.O. in keeping peace and disarmament in the World.

Semester II (Paper III)

- To understand the Social and Economic effects of British Rule in India and Development of revolts against Foreign Rule.

Semester II (Paper IV)

- To understand the Princely States during British Rule, Folk Culture, Local Leaders, and Historical Places of Chhattisgarh.

Semester III (Paper I)

- To understand the Political and Administrative continuation and changes after the revolt of 1857 in India.
- To understand the attitudes of British Government towards its neighbours.
- To understand the Economic effect of British Rule in India.
- To understand the Social Reforms and its effects during British Rule.

Semester III (Paper II)

- To prepare the students to compare the economy of India before and after British Rule in India.
- To understand the Economic effect of British Rule in India.
- To study the Imperial Economic Policies applied in India and its effect.

Semester III (Paper III)

- To understand the Ancient Indian Culture and Religion through study of different stages of Architecture of Ancient India.

Semester III (Paper IV)

- To understand the Policy and Administration during Ancient Period and prepare the students to compare the Present system to Ancient Times.

Semester IV (Paper I)

- To understand the freedom struggle and its different ways as Moderates, Extremists, Revolutionaries.
- To understand the Gandhian thoughts and application in freedom movement and the Partition of India.
- To understand Communal Politics and its Origin in India.
- To understand the Development of Planned Economy, Non- Align Movement and Foreign Policy of Independent India.

Semester IV (Paper II)

- To understand the Imperial Economic Policy during British rule and Exploitation of India.
- To understand the effect of British Economic Policies.

Semester IV (Paper III)

- To understand the culture and development of Architecture in Medieval and Modern India.
- To familiarize and compare the different style of Architecture in Medieval India.
- To Familiarize the Colonial Architecture and development of New Cities.

Semester IV (Paper IV)

- To understand the continuation and difference of Administration System of Sultanate and Mughal Period.
- To understand the policy of nation state in Independent India.
- To understand the characteristics of Indian Constitution.

M.A. Sociology

Program Outcome

Upon successful completion of the program the post-graduate would be able to –

- Examine the roles and responsibilities of individuals, groups, and institutions in larger society, displaying understanding of the complex relationships between human behaviour and the social context.
- Propose a plan of research for a sociological problem or issue, including conceptualization of the problem, review of pertinent literature, design of a research study, and identification of methods appropriate for exploring the problem or issue.
- Apply various theoretical perspectives to issues in society, showing how a perspective frames each issue, that is, how we understand the issue, the kinds of questions we can ask about it, and the kinds of research methods we can apply to answering the questions.

COURSE OUTCOME

Semester I (Paper I)

Students would be able to gain knowledge about the historical, social, and economical profile of sociology and the pioneers of the subject as well as thoughts of great Indian Thinkers, and their respective classical theories which paved the way for Sociology to develop as an independent discipline of social enquiry.

Semester I (Paper II)

Students will gain insight about the Major Schools of Sociology and Advance Sociological theories of social structure, structural functionalism and Neo-functionalism as well as structuralism and post structuralism.

Semester I (Paper III)

Students will understand the meaning, scope and importance of social research, scientific method and its logic. They will gain knowledge about the types of research, techniques of data collection, meaning and significance of statistics and measures of central tendency.

Semester I (Paper IV)

Rural and Agrarian Societies are one of the earliest forms of community and civilization. This paper examines the structure, characteristics, culture, problems, development and transformation of rural society. This paper also examines the size and composition of the population of India, problems related to population Explosion, measures and policies to control it.

Semester II (Paper I)

Students will further get in – depth knowledge about the classical theories of eminent sociologist as well as classical theories which enriched the subject of sociology.

Semester II (Paper II)

Students will know about the Recent Integrative Developments in Sociological Theory, as well as Contemporary Sociological Theories, Interactionalist Reflective and theories from Modernity to Postmodernism and beyond.

Semester II (Paper III)

Students will understand how to collect, analyse and interpret empirical evidence in sociological research they will be acquainted about the role of evidence in social sciences and how to conduct both qualitative and quantitative sociological research.

Semester II (Paper IV)

Students will get to know major Agrarian Movements in India, Globalisation and its Impact on Agriculture, as well as rural Reconstruction in India. Students will know about Social Demography, Fertility, Mortality, Migration, Theories of Demography etc.

Semester III (Paper I)

This paper will make students acquainted with the rich heritage and culture of India, its cultural, religious, and linguistics diversities. They will know about the concept of Indian Society, Indian villages, and Units representing the society.

Semester III (Paper II)

Change is a Universal phenomenon which continuously takes place in every society. This paper will unable students to understand the process of change and development, its theories,

factors of change and social change in contemporary India, changed perspective on social and ecological development.

Semester III (paper III)

This paper analyses the relationship between society and Industry. Industrialization, Industrial planning, Industrial Revolution and policies, Human resource and Planning.

Semester III (Paper IV)

Through the development of an understanding of theories of crime, law and criminal justice system students can demonstrate the role of criminology theory as framework for understanding crime rates, patterns and forms of crime and changing profile of criminals and crime.

Semester IV (Paper I)

Students will get insight about the Theoretical perspectives of Indian society by eminent sociologists like Indo-logical perspective, Structural Functionalism, Marxism or Conflict perspective, Civilization Perspective and Subaltern perspective etc.

Semester IV (Paper II)

Under Sociology of change and development students will get to know the Dependency theory of World system, agencies of development, social policies for planned development, effect of Information Technology, Revolution and Globalisation on Society etc.

Semester IV (Paper III)

Students will further get insight about social organisations, concepts of organisation and theory of management, personal management, employee organisations like Trade Unions, managers work Organization, participatory management, industrial conflict and its Resolution.

Semester IV (Paper IV)

Students should develop an understanding of the social correlates of crime and the distribution of crime across time and space. Theory of punishment, history of Prison in India Correctional Programmes in Prison and Problems related to it Jail Management, Terrorism, and Naxalism in Chhattisgarh.

M.A. Economics

Programme Outcome

• Acquire knowledge with facts and figures related to various subjects economics such as – micro-economics, Quantita Methods, International trade, public finance, demography.

• Finds jobs for their livelihood. • Understand the basic concepts of economics.

• Analyse economics behaviour in practice. • Understand economics way of thinking.

• Analyse historical and current events from an economic perspective. • Write and discuss economical issues at national levels.

• Prepare for the competitive examination CGPSC, UPSC etc.

• Develop an ability to suggest solutions for various economic problems.

• Find alternative approaches to economic problem through the exposure from the course work in allied fields.

Course Outcome

Semester I: PAPER I: Demand & Production Analysis in Micro Economics

• The students will learn how market organize core economic activities such as production, consumption and the law of demand and supply and the growth of productive resources.

• Students will learn to apply economic theories and methodologies in analyzing economic issues in various sub fields of applied micro economics.

PAPER II: Economics of Growth & Planning in India

• To enable the students to understand modern economic growth, obstacles to economic growth and the measurement of economic development.

• Understand the capital output ratio, input-output analysis and cost benefit analysis.

• To import knowledge about the India's five-year plans and its achievements and failures.

PAPER III: Quantitative Method

• Collect appropriate data needed, manipulate and draw. Use and apply central tendency, dispersion and skewness.

• Explain the concept of correlation, analyses and interpret covariance and correlation co-efficient.

• Demonstrate the basic concept of probability. Solve probability problems by applying probability concept.

•Illustrate ordinary least squares and use it to estimate regression coefficient.

• Know how to calculate Index number and its importance in economics.

PAPER IV: Human Development & Infrastructure in Indian Economy

• All the end of the course, a student should be able to understand the development paradigm adopted in India since Independence and evaluate its impact on economic as well as social Indicators of progress and wellbeing.

• Student should be able to understand the role of infrastructure and transportation in shaping and improving the economic performance of the country.

• Gain knowledge of the need, components and objectives of Human Development in India and the sole of education in human capital formation.

• Students understand the importance of capital formation in India and the role of foreign capital.

PAPER V: Demography

- The students will be able to define and explain the importance of demography.
- Understand the theories of population.
- Know about the fertility, mentality, and Nuptiality.

Semester II: PAPER I: Pricing and Distribution Analysis in Micro Economics

- Get introduced to the frame work for learning about markets, perfect completion, monopoly, monopolistic completion, oligology, and duopoly.
- To understand the introductory micro economics theory in a local, regional, and international scenario.
- Gain knowledge about welfare economics, Linear programming and game theory.

PAPER II: Theories of Economic Growth and Development

- To enable the students to understand the various theories of economic growth.
- Understand the Neo-classical theories and partial theories of development and its applicability in the planning of India.

PAPER III: Statistics Research Methodology & Computer Application.

• Students are able to calculate time series, and the association of attributes.

• Students understand the importance of research methodology and research design.

• Identify the important conditions conducive to the formulation of hypothesis.

• Learn the classification and tabulation of data.

• They learn the basics of computer which are important in modern times.

PAPER IV: Sectoral & Economic Reforms in India

• Students are able to sensitize the overall development and engine of growth in agriculture, draw distinctive features of rural economy.

• Students are able to understand the role of economic policies in shaping and improving economic performance in agriculture, manufacturing and services.

PAPER V: Population Dynamics & Population Policy in India

• Students are able to prepare life tables.

• They study the census in India.

• They are able to analyses the population policy in India and the family planning strategies and their outcomes.

Course Outcome

SEMESTER III : PAPER I: Theory of Money

• Understand the quantity theory of money Fishers and Cambridge equation.

• Understand the concept of multiplier and acceleration.

• Study the theory of inflation, business cycles and the meaning, objectives and instruments of monetary and fiscal policies.

PAPER II: International Trade & Tariffs

• The students get the knowledge about the pure theory of international trade.

• They come to know the changes in the composition as well as direction of foreign trade and the causes of deficits in the balance of payments, measures adopted to correct the deficits etc.

PAPER III: Public Economics

• To acquaint the students with the issues relation to the government in the changing era and the justification for government intervention.

• To introduce the students the nature and theories of public goods and private goods.

• To familiarize the students with the various aspects of the theory of public choice.

• To make the students aware of the recent trends in taxation and budgetary policy.

PAPER IV : History of Economics Thought

• The students acquire knowledge about the thoughts of various economists from classism to scientific socialism.

• They come to know about mercantilist and physiocrats, their growth and downfall.

PAPER V: Environmental Economics

• Realize the importance and influence of environment on the economy. Arose their feelings to make cleaner environment so as to achieve harmonious development.

• Understand the causes of environmental pollution; suggest appropriate measure to correct environmental degradation.

• They come to know about the conservation of environment and environmental laws in India.

SEMEMSTER IV: PAPER I: Macro Economics

• Macro-Economics helps the students to understand how economy is moving as a whole.

• Students are able to know consumption and investment function and their determinants.

• It helps to understand the functioning of a complicated modern economic system.

• It helps to bring stability in price level, and analysis fluctuations in business activities.

PAPER II: International Monetary System & Trade Reforms in India

After successfully completing the paper students will have the ability to:

• Understand the nature and scope of international economics.

• Understand the international organization UNCTAD, IMF, IBRD, their organization, functions, achievements and failures.

• Gain knowledge about commercial treaties.

• Explain trade problems and trade policies in India.

PAPER III: Public Finance and Fiscal Policy in India

• Students are able to describe the principles of federal finance.

• Students are able to describe the objectives and components of fiscal policy, describe the role of fiscal policy in the economic development of India.

• Students can describe the government budget; explain different types of budgets such as balanced and unbalanced budget, capital and revenue budget, zero based budgeting.

PAPER IV: Modern Economics Thought

• Students have the ability to explain the marginalist approach and the justification of mathematical models to describe consumer and firm behavior, explain the process by which an economic theory becomes part of the body of knowledge in economics.

• Have historical consciousness of economic ideas.

• Gain knowledge about Indian Economic Thought – the views of Naoroji Ranade, Gokhale, Gandhiji and Amartya Sen.

PAPER V: Labor Economic with Special Reference to India

• Students will have the knowledge to introduced to basic theoretical models in the labor economics literature.

• Have the skills and knowledge to published articles in the academic literature.

- Have the ability to formally analyze the policy related issues in labor economics.
- Evaluate and enter the labor market policies of governments, unions, and other factors in the labor markets.

M.A. English

Programme Outcome

- To build the development of the discipline from undergraduate to master's level.
- To understand the emotions of literature
- The programme hopes to prepare students for the challenges of a teaching career.

- The course aims at hands on job. Seminars and Assignments apart from being the existing methodology of teaching will also ensure exposure to expert views and global trends in the areas of literary and cultural theories.

Course Outcome

Semester I

Paper I – Literature in English [A] [1550-1660]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1550-1660.
- To study the literature of Joh Donne, Francis Bacon, William Shakespeare, Thomas Browne, Machiavelli, and Christopher Marlowe.

Paper II – Literature in English [A] [1660-1798]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1660-1798.
- To study the literature of John Dryden, Addison, Steele, Pope, Congreve, and Swift.

Paper III– Literature in English [A] [1798-1914]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1798-1914
- To study the literature of William Wordsworth, Shelley, John Keats, Henrik Ibsen, Robert Lynd, and Hazlitt

Paper IV – Literature in English [A] [1914-2000]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1914-2000
- To study the literature of Sarojini Naidu, Auden, Sri Aurobindo, T.S.Eliot, Munshi Premchand, and Bertrand Russel.

Semester II

Paper I – Literature in English [B]{1550-1660]

- To give the students a firsthand knowledge of major literary works of the period – The works of William Shakespeare and John Milton.
- To provide the knowledge of the political, economic, social, and intellectual background so as to enable to study the works of representatives of the period.

Paper II – Literature in English [B] [1660-1798]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1660-1798.

- To study the works of William Blake, Thomas Gray, William Collins, Oliver Goldsmith, Henry Fielding, and Daniel Defoe.

Paper III – Literature in English [B] [1798-1914]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1798-1914.
- To study the works of Alfred Tennyson, Robert Browning, Charles Lamb, A.G.Gardiner, John Galsworthy, and Charles Dickens.

Paper IV – Literature in English [B] [1914-2000]

- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English between 1914-2000.
- To study the works of Dylan Thomas, Philip Larkin, W.B.Yeats, T.S.Eliot, S.Radhakrishnan, and Arundhati Roy.

Semester III

Paper I – Linguistics, Semantics, and Grammar

- To Introduce the students the broad areas of Linguistics, Semantics, and Grammar.
- To strengthen linguistic competence and performance of the students.

Paper II – Principles of Literary Criticism.

- To provide the knowledge o the classical critics and the main critics in the English critical tradition.
- To examine the works of Bharat Muni, Aristotle, Longinus, Philip Sidney, Samuel Johnson, P.B.Shelley, and Mathew Arnold.
- To build the aesthetics of English Literature.

Paper III – Indian Writing in English (Poetry and Prose)

- To understand the work of major Indian writers writing in English – Ravindranath tagore, Toru Dutt, Nissim Ezekiel, Gandhi, Nehru and Nirad C.Choudhary etc.
- To provide the knowledge of the political, economic, social, and intellectual background in Indian English literature.
- To enable in and appreciating literary texts and developing skills in literary analysis.

Paper IV – American Literature

- To understand the American literature and the works of Ralph W.Emerson, Arthur Miller, Walt Whitman, and H.D.Thoreau.
- To update the students with knowledge of the political, economic, social, and intellectual background of literature in English as representatives of America.

Semester IV

Paper I – Linguistics and Grammar (Phonetics, Phonology, and Stylistics)

- To Introduce the students the broad areas of Linguistics, Semantics, and Grammar – Phonetics and phonology.
- To introduce the basic concepts and methods in stylistics.

Paper II – Literary Criticism and Theory

- To understand the critics and theorists.
- To understand the works of T.S.Eliot , I.A.Richards, Cleanth Brooks, Ernest Jones, Ronald Barthes, Michael Foucault, and Homi.K.Bhabha.

Paper III – Indian Writing in English

- To study the works and understand Rvindranath Tagore, Kalidas, Girish Karnad, Vijay Tendulkar, Arvind Adiga, and Kamala Markandya.

Paper IV – American Literature

- To study the works of American Writers and understand writers like Emily Dickinson, Robert Frost, William Faulkner, Eugene O' Neill, William Carlos William, and Edgaar Allan Poe.

M.A. Geography

Programme Outcome

- Study of agriculture provides the knowledge of agriculture practices, productivity, problems o, and their solution to students to improve their own agriculture practice.
- Students can understand the climatic phenomena and its impact.
- Cover 20% of the subject related questions for competitive examination.
- After completion of the programme students can pursue for research work.

Course Outcome

Semester I

Paper I – Geomorphology

- Understand the basic structure of the land forms and its origin.
- Develop the understanding of the physical phenomena and study geomorphic process and its practical approaches, environmental hazards, fluvial process etc.
- Get the knowledge of applied geomorphology to identify the problems.

Paper II – Climatology

- Understand the weather phenomena, climate of the region, causes of variation of elements of climate.
- Helps the students to understand the global warming and climate change and the emerging problems of the world.

Paper III – Evaluation of Geographical Thought

- Understand the philosophical and methodological foundations of the subject and its place in the world of knowledge.
- To familiarize with the landmarks in development of geographic thought at different period of time.

Paper IV – Advanced Geography of India

- Provides the detailed knowledge of India to prepare the students for competitive examination.

Semester II

Paper I – Oceanography

- Students can identify the facets of oceans, evolution of ocean, physical and chemical properties of the sea water, atmospheric and oceanographic circulation.
- It helps the students to acquaint with the marine environment, its characteristics and its impact on costal economy.

Paper II – Geographical Methodology

- The regional feature of the state Chhattisgarh a fundamental requirement for the students of the CG.
- Study of the Geography of CG connect the students with the local scenario, geographical aspects of various issues of developments.

Semester III

Paper I – Geography of Rural Settlement

- To enable to diagnose special issues related to rural settlement.
- Understand the growth and evolution of rural settlement planning in India.
- Analyze and suggest rural settlement planning in India.
- Understand to examine the prevailing social and environmental issues in rural areas of India.

Paper II – Geography of Resources

- Understand the concept and approaches of natural resources.
- Understand the use and misuse of various resources and to analyze the future prospects.
- Understand the concept of sustainable and integrated resource management.

Paper III – Regional Planning and Development

- Provide the fundamental knowledge of the planning process.
- Learn to make a planning for the urban land use.
- Understand the concept of region in geography and its role and relevance in regional planning.
- Helps the student to identify the causes of regional disparities in development, perspectives, and policy imperative.

Paper IV – Environmental Geography

- Understand the environmental problems and play the role in conservation of environment.

Semester IV

Paper I – Population Geography

- Introduce the student the complex dimensions of population and the population crises of India.

Paper II – Urban Geography

- Understand the process of urbanization and origin, growth, and classification of urban settlement with relevant theories and models.
- Understand to examine the changing economic base and structure of the contemporary cities.
- Student learn to examine the contemporary urban issues urban planning, and urban policy perspectives.

Paper III – Agriculture Geography

- Familiarize the students with the concept, origin, and development of agriculture.
- Understand the environmental, technological, and social issues in agriculture sector with special reference to India.
- Study of drying techniques, excursion, field study, Levorotatory exercises, cartography, remote sensing, and GIS techniques.

- Provide the students a platform for the professional training that enhanced the employability.

Paper IV – Agriculture Geography

- Familiarize the students with the application of various theories, models, and classification, schemes of cropping pattern and productivity.
- Student can understand the environmental technological and social issues of agriculture sector.

Paper V – Geography of Tourism

- Understand the space, places of the earth surface and the study of Geography of tourism provide the students an opportunity to get the knowledge of various tourist places theoretically and practically both.
- Orients the student to the logistics of tourism industry and the role of tourism in regional development.
- Understand the impact of tourism on physical and human environment.

M.Sc. Foods and Nutrition

Programme Outcome

- The programme is essentially focused on professional development of graduates to become expert in the area of Nutrition – and community based. It has been planned to incorporate career development in the area of Nutrition.
- The programme planned are enriched with cognitive effective and practical components with adequate work experience relevant at the area of experience.
- The curriculum focus at P.G.level is to foster a firm theoretical background with amalgamation of practical skills and development of research related so that the graduates students are capable of critical and analytical thinking, sensitive to health issues and concerns.

Course Outcome

Semester I

Paper I Applied Human Physiology

- Enable the students to understand the integrated function of all systems and grounding of nutrition science in physiology.
- Understand the alteration of structure and functions of various organs and systems in disease condition.

Paper II – Food Science

- Provide understanding about the composition of various food stuffs.

Paper III – Clinical and therapeutic Nutrition

- Understand the etiologic, pathologic, and metabolic anomalies of acute and chronic disease and patients need.
- Understand the effect of various diseases on nutritional status, and nutritional dietary requirements.

Paper IV – Research methods and Scientific Writing

- Understand to apply the statistical technique to research data for analyzing and interpreting data .

Semester II

Paper I – Geriatric nutrition and Applied life Sciences

- Nutritional needs of the elderly and dietary management to meet nutritional needs, chronic degenerative diseases and nutrition problem of elderly people.

Paper II – Food Chemistry

- Enables students to use the theoretical knowledge in various application and food preparations.

Paper III – Problems in Human Nutrition

- Nutritional problems related diseases prevent among the affluent and the less privileged groups with reference to their incidence etiology and public health significance.
- Biochemical and clinical manifestation, preventive, and therapeutic measures of the same.

Paper IV – Statistics and Computer Application

- To understand the types, tools, and methods of research and develop the ability to construct data gathering, instruments appropriate to research design, to understand and apply the appropriate statistical technique for the measurement scale and design.

Semester III

Paper I – Advanced Nutritional Biochemistry

- Understands the mechanism adopted by human body for regulation of metabolic pathway get an insight in to inter relationship between various metabolic pathway.

Paper II – Principles of nutrition

- Orient the students with all the important stage o the art methodologies applied in nutritional assessments and surveillance of nutritional growth. Develop specific skills to apply the most widely used methods.

Paper III – Institutional Food Administration

- To provide practical field lab experience in the subject to equip individual to start teir own service until leaving to entrepreneurships.

Paper IV – Food Microbiology

- Gain knowledge of role of microbes in human and environment, understand the important microbes in food spoilage to learn advance technique used to learn food preservation.
- Learn to prevent food born disorders and legal aspects invaliding these areas.

Semester IV

Paper I – Methods of Biochemical Investigations

- To understand the principles of various analytical techniques for research.

Paper II – Advanced Nutrition

- Provide knowledge about physiological and metabolic role of various nutrients and their interactions with human nutrition.
- Enable students regarding pharmacological role of nutrients and their implications.

Paper III – Institutional Management

- Develop critical abilities and provide basic grounding for research technique.
- To develop knowledge base in key areas in food administration.

Paper IV – Maternal Nutrition

- Understand the physiological changes in pregnancy and lactation.
- Get acquaints with growth and developmental changes from conception to adolescence and inter relationship between nutrition and growth during the life cycle.

M.Sc. Human Development

Programme Outcome

The programme is essentially focused on Professional development of graduates to become expert in the area of Human Development. It is focused to develop professional and entrepreneurial skills and in the domains of early childhood care and education, working for persons with special needs, empowerment of families and communities and development programming.

The curriculum focus at P.G.Level is to foster a firm theoretical background wth amalgamation o practical skills and development of research related, so that the graduates students are capable of critical and analytical thinking, sensitive to societal issues and concerns.

Course Outcome

Semester I

Paper I – Early Childhood Care and Education

- To develop the skills and techniques to plan activities in ECCE Centers of different types, to conduct activities in early childhood care and education ad to work effectively with patents and community.

Paper II – Advanced Study in Human Development

- To undertake an advanced study of the stages in Human Development with special focus on youth, adulthood and old age.

Paper III – Psychology in Normal Adaption

- To understand the various strategies for coping stress in home and workplace.

Paper IV – Research Methods and Scientific Writing

- To apply statistical technique to research data for analyzing and interpreting data meaningfully.

Semester II

Paper I – Development of Creativity

- To understand the relevance and scope of studying creativity.
- To become familiar with psychometric measurement and alternate ways of assessing creativity.

Paper II – Methods of studying Human Development

- To undertake an advanced study of the stages in human development with special focus on stages from prenatal development to adolescence.
- To study different methods and techniques of understanding Human Development.
- To apply the various methods studied in practical context.

Paper III – Psychopathology

- To understand the importance of mental health in different stages of life.
- To understand the etiopathology of various mental illness and their remedy.

Paper IV – Statistics and Computer Applications

- To understand the types, tools, and methods of research and develop the ability to construct data gathering, instruments appropriate to research design.
- To understand and apply the appropriate statistical technique for the measurement scale and design.

Semester III

Paper I – Communication Technologies

- To develop understanding regarding the new communication technologies and their use.
- To develop skills in developing and using different communication technologies or various presentations.

Paper II – History and Theories of Human Development

- To understand the need or theory in Human Development.
- To understand the practical applications of theory.

Paper III – Study of family in society, culture, and Psychology

- To release and appreciate universals and variations in family life pattern across culture and sub cultures.
- To create awareness regarding structure function needs and strengths of families with specific reference to the Indian family.
- To be familiar with research trends in the field of culture and families.

Paper IV – Persons and Children with Disabilities and Illness

- To become aware of various impairments and the manner in which these affects the life of individuals.
- To identify the physical and social barriers which create difficulties for people with disabilities.
- To become aware of experiences with persons with disabilities and recognize that having impairment is only aspect of their lives.

Semester IV

Paper I – Management of Programmers for Children and Family, Maternal and Child Nutrition

- To understand the purpose scope and challenges in the management of programmers for children and families.
- To offer students opportunities to work in children and families in different settings.

Paper II – Current trends and issues in Human Development

- To understand the importance of innovative/ new programmes in the field.

- To develop an understanding the role of advocacy in promoting issues and concerns related to human development.

Paper II – Mental Health in Development Perspectives

- To develop skills for promoting mental health across the life span.
- To understand the importance of mental health in different stages of life.

Paper IV – principles in Guidance and Counseling

- To understand the need for guidance and counseling in human development.
- To introduce basic concepts in guidance and counseling.
- To discuss the processes involved in counseling at different stages in life.

एम. ए. हिन्दी

Programme Outcome

1. भाषा संस्कृति और युग की समझ विकसित करना।
2. भारतीय व पाश्चात्य विविध दार्शनिक व वैचारिक सिद्धांतों की समझ।
3. ऐतिहासिक संदर्भ में साहित्य की समझ विकसित करना।
4. भाषा, लिपि, व्याकरण का समग्र ज्ञान।
5. कम्प्यूटर में हिन्दी के अनुप्रयोग।
6. व्यवसायिक व वाणिज्यिक हिन्दी का ज्ञान।

Course Outcome

प्रथम सेमेस्टर

1. प्राचीन काव्य

हिन्दी साहित्य के आदिकालीन काव्य का परिचय, मध्यकालीन काव्य का परिचय और तत्कालिन सांस्कृतिक, साहित्यिक, ऐतिहासिक आदि परंपराओं का अध्ययन विवेचन।

2. छायावाद एवं राष्ट्रीय काव्यधारा

विविध आधुनिक विचारधाराओं में प्रवहमान हिन्दी काव्य और कवियों का समीक्षात्मक विवेचन।

3. हिन्दी नाटक एवं निबंध साहित्य

हिन्दी गद्य साहित्य की महत्वपूर्ण विधाओं में नाटक एवं निबंध की महत्वपूर्ण रचनाओं व रचनाकारों का अध्ययन एवं विवेचन।

4. भाषा विज्ञान

भाषा, भाषिक व्यवस्था, भाषा संरचना आदि का भाषा वैज्ञानिक अध्ययन-विवेचन। देवनागरी लिपि का परिचय और मानकीकरण का अध्ययन।

5. हिन्दी साहित्य का इतिहास (आदिकाल से रीतिकाल)

आठवी-नवीं शताब्दी से लेकर आधुनिक काल के पूर्व तक के विकास परिदृश्य के साथ साहित्यिक सृजनशीलता के विविध रूपों, प्रवृत्तियों और भाषा शैलियों का ज्ञान।

द्वितीय सेमेस्टर

1. मध्यकालीन काव्य-

हिन्दी साहित्य के "स्वर्ण युग' की समीक्षा और महत्वपूर्ण कवियों व रचनाओं का परिचय।

2. छायावादेत्तर काव्य

छायावाद के पश्चात् की महत्वपूर्ण काव्य धाराएँ और महत्वपूर्ण कवियों-रचनाओं का अध्ययन-विवेचन।

3. हिन्दी उपन्यास एवं कथा साहित्य

महत्वपूर्ण उपन्यासों, कहानियों और रचनाकारों की समीक्षा और युगीन संदर्भ की समझ।

4. हिन्दी भाषा

हिन्दी भाषा का ऐतिहासिक, वैज्ञानिक परिचय ।

5. हिन्दी साहित्य का इतिहास (आधुनिक काल)

आधुनिक वैचारिक परिदृश्य में हिन्दी कविता, हिन्दी गद्य और आलोचना का परिचय तथा विभिन्न आधुनिक काव्य प्रवृत्तियों एवं रचनाकारों का विवेचन।

तृतीय सेमेस्टर

1. भारतीय काव्यशास्त्र

साहित्य के सैद्धान्तिक स्वरूप का परिचय व विवेचन

2. कामकाजी हिन्दी एवं अनुवाद

हिन्दी के आधुनिक कामकाजी स्वरूप का परिचय, कम्प्यूटर इंटरनेट का परिचय और हिन्दी का अनुप्रयोग।

3. भारतीय साहित्य का सैद्धांतिक विवेचन

हिन्दीतर भाषाओं का साहित्य और तुलनात्मक विवेचन।

4. छत्तीसगढ़ी भाषा और साहित्य का सैद्धांतिक स्वरूप

राजकीय भाषा और साहित्य की अद्यतन जानकारी व विवेचन

5. सैद्धांतिक पत्रकारिता

साहित्य कला के साथ-साथ रोजगारपरक पत्रकारिता के क्षेत्र का समुचित अध्ययन।

चतुर्थ सत्र

1. पश्चात्य काव्यशास्त्र

   विश्वपटल पर साहित्यशास्त्र से परिचय ।

   हिन्दी आलोचना का अद्यतन अध्ययन ।

2. पत्रकारिता और मीडिया लेखन

   पत्रकारिता और मीडिया के क्षेत्र में हिन्दी तथा प्रयोजनमूलक हिन्दी

3. भारतीय साहित्य की विविध विधाएँ

   हिन्दीतर साहित्य का अध्ययन और भारतीयता के सूत्रों की समझ ।

4. छत्तीसगढ़ी के प्रतिनिधि कवि एवं साहित्यकार

   प्रादेशिक राजभाषा के साहित्य का अध्ययन ।

5. व्यवहारिक पत्रकारिता

   पत्रकारिता का संपूर्ण परिचय।