



# DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh  
Reaccredited Grade "B" By NAAC  
Registered Under Section 2(F) & 12(B) of UGC Act  
Affiliated to Hemchand Yadav University, Durg (C.G.)



## **PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES**

### **COURSE OUTCOMES of B.COM 1ST YEAR**

FINANCIAL ACCOUNTING	
CO1	Understand the accounting process, recording, classifying, summarizing of transactions
CO2	Identify and apply principles and regulations relating to financial accounting and the preparation of financial statements for profit and non-profit organizations
CO3	Understand rectification of errors, causes of difference and preparation of bank reconciliation statement
CO4	Critically analyse and interpret case information and be able to develop a convincing argument to present their views on relevant accounting issue
CO5	Analyse accounting for Hire Purchase and Installment Systems, accounting treatments after dissolution of the firm in different cases

BUSINESS MATHEMATICS	
CO1	Apply the knowledge of mathematics ( matrices, calculus, optimization) in solving business problems
CO2	Describe and demonstrate the use of mathematical techniques with emphasis on business applications.
CO3	Recognize the importance and value of mathematical thinking, training, and approach to problem solving, on a diverse variety of disciplines through linear programming
CO4	Analyzing ratio, proportion percentages, simple and compound, interest and profit loss.
CO5	Describing mathematical skills required in mathematically intensive areas in commerce such as Finance and Economics

BUSINESS COMMUNICATION	
CO1	Understand the concept of communication and types
CO2	Understanding effective written communication in a managerial environment.
CO3	Comprehend individual and group behaviour and the relevance of better interpersonal skills.
CO4	Acquire the skills of drafting business reports.
CO5	Draft the company meeting notices and letters to the editor

BUSINESS REGULATORY FRAMEWORK	
CO1	Understand the legal rules regarding contract
CO2	Develop knowledge on the different elements of contract, performance of contract and different modes of discharge of contract
CO3	Understand the Indian Partnership Act
CO4	Identify the rules and regulations of sale of Goods Act
CO5	Understanding the law relating to the consumer protection act 1986 information technology act 2000 and cyber law.

BUSINESS ECONOMICS	
CO1	Understand and describe the basic concept of economics, analyse the central economic problem.
CO2	Analyse consumer behaviour and interpret consumer decision making in terms of utility of the product and the consequential demand for the product and services.

<b>CO3</b>	Describe market structures and firm and industry and pricing of products
<b>CO4</b>	Recognise different factors of production, analyse reasons of economies and diseconomies of scale and decide the best-suited level of production
<b>CO5</b>	Explain theories of distribution, theories of rent theories of wages and theory of interest

<b>BUSINESS ENVIRONMENT</b>	
<b>CO1</b>	Describe the concept of the various constituents of environment and their impact on businesses.
<b>CO2</b>	Understand the social, legal, technical and allied environment
<b>CO3</b>	Analysing Unemployment; Poverty; Regional imbalances; Social injustice; Inflation; Parallel economy; Industrial sickness.
<b>CO4</b>	Understand Monetary and fiscal policy; Industrial policy; Industrial licensing.
<b>CO5</b>	Integrate the concept international trading environment and multilateral route (WTO)

## COURSE OUTCOMES OF B.COM 2ND YEAR

<b>CORPORATE ACCOUNTING</b>	
<b>CO1</b>	Acquire knowledge on various types of shares and debentures and accounting treatment of issues, forfeiture and reissue of shares and issue of debenture
<b>CO2</b>	Gain knowledge on preparation and presentation of Company Final Accounts in accordance with requirements of Companies Act, 1956.
<b>CO3</b>	Analyse consolidated balance sheet of amalgamated company (merger and purchase method).
<b>CO4</b>	Evaluating Consolidated Balance Sheet of holding companies with one subsidiary only. Final Account of Banking Companies
<b>CO5</b>	Acquire knowledge in types of amalgamation as per Accounting Standard -14.

<b>COST ACCOUNTING</b>	
<b>CO1</b>	Demonstrate knowledge and understanding of the fundamentals of Cost Accounting.
<b>CO2</b>	Understand the need of labour cost control, various components of labour cost, labour turnover ratios and various incentive schemes
<b>CO3</b>	Prepare cost estimates for allocation and apportionment of overheads, calculate cost of products/services using overhead absorption rates to trace indirect costs to cost centres.
<b>CO4</b>	Apply inventory management tools and techniques for effective inventory control and review of financial analysis of inventory management and control
<b>CO5</b>	Evaluate Reconciliation of cost and financial accounts; Break Even Point

<b>PRINCIPLES OF BUSINESS MANAGEMENT</b>	
<b>CO1</b>	Develop the knowledge on theoretical frameworks of schools of management thought
<b>CO2</b>	Understand the key concepts of planning and importance of decision making
<b>CO3</b>	understand the key concepts of planning and importance of decision making
<b>CO4</b>	Remembering the concept of motivating and Leading People at work
<b>CO5</b>	Identify the various sources of recruitment and selection process

<b>COMPANY LAW</b>	
<b>CO1</b>	Understand the background of the new company act 2013 and explain kinds of company
<b>CO2</b>	Describe memorandum of association and articles of association
<b>CO3</b>	Determine private placement and prospectus and misrepresentation in prospect
<b>CO4</b>	Understand the meaning and nature of capital share and capital.

<b>CO5</b>	Understand membership in a company and its procedure and analyse the meaning of directors and concepts.
------------	---

<b>BUSINESS STATISTICS</b>	
<b>CO1</b>	Understanding of the basics of statistics and its application to analyze and create an edge for the business.
<b>CO2</b>	Analysing Dispersion and their measures, Skewness and measures; Kurtosis and measures
<b>CO3</b>	Ability to interpret the correlation and regression technique between two or more than two variables
<b>CO4</b>	Define and learn the concept and applications of index numbers and time series in business decision making.
<b>CO5</b>	Evaluating Forecasting concept, types and importance; General approach to forecasting; Methods of forecasting;

<b>FUNDAMENTALS OF ENTREPRENEURSHIP</b>	
<b>CO1</b>	Understanding of the concepts of Entrepreneurship and their development in all forms
<b>CO2</b>	Understanding basics of entrepreneurial skills and competencies to provide the participants with necessary inputs for creation of new ventures and develop entrepreneurial behaviour
<b>CO3</b>	Understand Entrepreneurial Behavior: Innovation and entrepreneur; Entrepreneurial behavior and Psycho - Theories, Social responsibility
<b>CO4</b>	Familiarize the students with the fundamentals Entrepreneurial Development Programs (EDP): EDP, their role, relevance, and achievements
<b>CO5</b>	Identify Role of an entrepreneur in economic growth as an innovator, bringing about social stability and balanced regional development of industries

## COURSE OUTCOMES OF B.COM IIIrd

<b>INCOME TAX</b>	
<b>CO1</b>	Understand the basic concepts of Income Tax and gain knowledge on residential status.
<b>CO2</b>	Acquire the conceptual knowledge of Salary and House Property.
<b>CO3</b>	Apply provisions relating to Income from Profits and Gains of Business or Profession of an individual.
<b>CO4</b>	Identify the various methods of computing Capital Gains and familiarize with the provisions of Income from Other Sources
<b>CO5</b>	Perceive the knowledge of Set-off and Carry forward of Losses and equip themselves to compute the Total Income and Tax Liability

<b>MANAGEMENT ACCOUNTING</b>	
<b>CO1</b>	Understand the concept of Management Accounting and various tools and techniques available to analyse the financial statements
<b>CO2</b>	Analyse the results of Ratio Analysis to know the position of a company
<b>CO3</b>	Evaluate the flow of funds, cash receipts and disbursements during a specified period
<b>CO4</b>	Apply the cost-volume-profit techniques in optimal managerial decision making
<b>CO5</b>	Evaluate the future period and adopt control measures by preparing different budgets

<b>AUDITING</b>	
<b>CO1</b>	Remembling the principles and procedure of auditing
<b>CO2</b>	Understand the duties and responsibilities of auditors
<b>CO3</b>	Apply audit knowledge towards preparation of audit report
<b>CO4</b>	Analyse the audit process from the planning stage through completion of the audit
<b>CO5</b>	Evaluate the internal audit process including the professional standards applicable to the audit profession

<b>PRINCIPLES OF MARKETING</b>	
<b>CO1</b>	Understand the traditional and modern concept of marketing

<b>CO2</b>	Understand the elements of the marketing mix—satisfy customer needs and understand the process and usage of segmentation, targeting and positioning.
<b>CO3</b>	Understand the concept of product, packaging role and functions, Product life cycle concept and importance of price in the marketing mix.
<b>CO4</b>	Analyse the Concept and role, types of distribution channels. Factors affecting choice of a distribution channel.
<b>CO5</b>	Knowledge of relevance of promotion and advertising in modern competitive world.

<b>INTERNATIONAL MARKETING</b>	
<b>CO1</b>	Analyze the environmental variables that influence international marketing;
<b>CO2</b>	Describe the strategies and tactics that can lead to successful international marketing given those environmental constraints
<b>CO3</b>	Discuss the more typical management decisions and problems faced, highlighting those peculiar to the international arena;
<b>CO4</b>	Understand how managers perform the functional tasks that constitute international marketing such as marketing intelligence and “mix” adaptations;
<b>CO5</b>	Apply comprehensive international marketing plan

<b>INDIRECT TAX WITH GST</b>	
<b>CO1</b>	Understand the sources of revenues of the government, role of Custom in international trade.
<b>CO2</b>	Analyse and evaluate the effect of an indirect tax on consumers, producers and the government.
<b>CO3</b>	understands various definitions and terminologies of Goods and Service Tax (GST) & Customs Laws.
<b>CO4</b>	Analyse the Goods and Service Tax (GST) payable by a supplier after considering the eligible input tax credit
<b>CO5</b>	Understand the persons liable for registration and the persons not required to obtain registration under the GST law

## **PROGRAM OUTCOMES (PO) OF B.COM**

### **STUDENTS ARE ABLE TO:**

<b>PO1</b>	Apply theories and practices of commerce and trade.
<b>PO2</b>	Apply concepts, principles and procedures in transacting business effectively.
<b>PO3</b>	Develop entrepreneurial skills in students.
<b>PO4</b>	Acquire entrepreneurial skills and provide employment opportunities to the society
<b>PO5</b>	Acquire knowledge of different specializations like Accounting, Costing, Banking, and Finance with the practical exposure will help the students to stand in any kind of organization.
<b>PO6</b>	To prepare the students for preparing higher studies in business like M.Com., M.B.A., and professional Courses like MCA.,C.A., ICWA., ACS.,etc.

## **PROGRAM SPECIFIC OUTCOMES (PSO) OF B.COM**

<b>PSO1</b>	The students will acquire the knowledge, skill in different areas of communication, decision making, innovations and problem solving in day to day business activities
<b>PSO2</b>	Students will gain thorough systematic and subject skills within various disciplines of finance, auditing and taxation, accounting, management, communication, computer.
<b>PSO3</b>	Enhance the skills of Entrepreneurial attitude, interpersonal skills and create an impact on social life

## **PROGRAMME OUTCOME (PO) OF M.COM**

### **STUDENTS ABLE TO:**

<b>PO1</b>	Understand in-depth and advanced knowledge in the areas of Finance, Accountancy and taxation for industry readiness.
<b>PO2</b>	Understand advanced studies through scientific research methodology by applying critical thinking and analytical reasoning
<b>PO3</b>	Develop competencies in managerial skills, effective communication and team work

PO4	Apply the various concepts, theories and models in the area of Finance, Banking, Insurance, Accounting, Taxation etc. in business operations.
PO5	Apply knowledge in different functional areas of management, managerial principles, economic theory and quantitative techniques of decision-making like Statistics and Operations Research are imbibed by the students
PO6	Develop the skills of students in conceptualizing business problems and nurturing innovative minds with problem solving aptitude.

### PROGRAMME SPECIFIC OUTCOMES (PSO) OF M.COM

PSO1	Ability to understand various dimensions of the banking, micro finance, international financial institutions, and global markets.
PSO2	Develop research attitude and encourage research publication based on research projects. Promote research publications based on academic research project report.
PSO3	Apply the knowledge gained during the course of the program to identify, formulate and solve real life problems to meet the core competency with continuous up gradation.

  
**PRINCIPAL**  
 Govt. P.G. College, Bhilai-3.  
 Distt.-Durg (C.G.)



**DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE**

Bhilai-3, Dist:- Durg, Chhattisgarh

**Reaccredited Grade "B" By NAAC**

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



## **PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES**

### **B.Com.- 3 years Undergraduate programme**

#### **Programme Outcomes (PO)**

**P01.** The students after the completion of this programme will be enabled to overcome the challenges in the field of commerce. They can become entrepreneurs in their choice of field.

**P02.** The students after the completion of this programme will become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stock- exchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors etc.

**P03.** The Course teach them to work and think analytically.

The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**P04.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby communicate through ideas and innovation.

**P05.** Interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**P06.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**P07.** Learn environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**P08.** The students will be able to engage themselves in life-long self-determining and learning in the Comprehensive background of socio-technological changes for continued self-directed and learning.

#### **Programme Specific Outcomes (PSO)**

**PS01.** Understand financial accounting.

**PS02.** Understand business communication.

**PS03.** Understand business mathematics.

**PS04.** Understand business regulatory framework.

**PS05.** identify a business environment.

**PS06.** Economics of a business.

**PS07.** Essentials of corporate accounting.

**PS08.** Learn essentials of company law.

**PS09.** Understand the essentials of cost accounting.

**PS010.** Understand the principles of business management.

**PS011.** understand the essentials of business statistics.

**PS012.** understand the fundamentals of  
entrepreneurship.

**PS013.** Understand the principles of direct taxation  
income tax.

**PS014.** Learn the procedures of auditing.

**PS015.** Learn essentials, principles and procedures of indirect taxation and GST.

**PS016.** Understand the essentials of management accounting.

**PS017.** understand the fundamentals of insurance.

**PS018.** understand the essentials of banking and money management.

### **Course Outcomes (CO)**

#### **Course 1: Financial Accounting**

**CO1.**The students after the completion of this course will be able to impart the knowledge of various accounting concepts.

**CO2.**The students after the completion of this course will be able to instill the knowledge about accounting procedures, methods and techniques & develop skills for computerized Accounting.

#### **Course 2: Business Communication**

**CO1.**The students after the completion of this course will be able to understand the concept, process and importance of communication.

**CO2.** The students after the completion of this course will be able to develop awareness

regarding new trends in business communication.

**C03.** The students after the completion of this course will be able to recognize various media of communication.

### **Course 3: Business Mathematics**

**C01.** The students after the completion of this course will be able to prepare for competitive exams.

**C02.** The students after the completion of this course will be able to improve their calculating power & skills.

**C03.** The students after the completion of this course will be able to understand the concept of simple interest, compound interest & concept of EMI.

### **Course 4: Business Regulatory Framework**

**C01.** The students after the completion of this course will be acquainted with the basic concepts, terms & Provisions of mercantile & Business Laws.

**C02.** The students after the completion of this course will be able to develop the awareness regarding laws affecting business, trade & commerce.

### **Course 5: Business Environment**

**C01.** The students after the completion of this course will become aware about the Business Environment.

**C02.** The students after the completion of this course will be able to create entrepreneurial awareness.

**C03.** The students after the completion of this course will be able to motivate themselves for taking up entrepreneurship as career.

### **Course 6: Business Economics**

**C01.** The students after the completion of this course will be able to use various economic theories.

**C02.** The students after the completion of this course will be able to apply economic reasoning to problems of business.

**C03.** The students after the completion of this course will be able to understand the basic micro economic concepts.

### **Course 7: Corporate Accounting**

**C01.** The students after the completion of this course will be enabled to develop awareness about corporate accounting with the provisions of companies Act & Accounting as per Indian Accounting standards.

**C02.** The students after the completion of this course will be enabled to develop



conceptual aspect of corporate accounting & develop skills about accounting standards.

### **Course 8: Company Law**

**CO1.** The students after the completion of this course will be able to impart the knowledge of fundamentals of company law.

**CO2.** The students after the completion of this course will be able to update the knowledge of provisions of the companies Act of 2013.

### **Course 9: Cost Accounting**

**CO1.** The students after the completion of this course will be enabled with the knowledge of Basic cost concepts, Elements of cost, Ascertainment of materials & costing.

**CO2.** The students after the completion of this course will be able to understand various methods of costing & their applications.

### **Course 10: Principal of Business Management**

**CO1.** The students after the completion of this course will be able to understand about business management concept.

**CO2.** The students after the completion of this course will be able to understand about various functions of business management.

### **Course 11: Business Statistics**

**CO1.** The students after the completion of this course will be able to understand & apply the concepts of mean, mode & median.

**CO2.** The students after the completion of this course will be able to apply various methods of sampling & probability measurement.

### **Course 12: Fundamentals of Entrepreneurship**

**CO1.** The students after the completion of this course will be able to create entrepreneurial temper.

**CO2.** The students after the completion of this course will be able to take up the cause of entrepreneurship.

### **Course 13: Income Tax**

**CO1.** The students after the completion of this course will be able to understand the basic concept & acquire knowledge about computation of Income.

**CO2.** The students after the completion of this course will be enabled to submit Income Tax Returns, Advance Tax & Tax deducted at source

**CO3.** The students after the completion of this course will be able to identify the

procedures of Tax collection authorities under Income Tax Act.

#### **Course 14: Auditing**

**CO1.** The students after the completion of this course will be able to acquaint themselves about concept & principles of Auditing, Audit process, Assurance standards & Tax Audit and Audit of computerized system.

**CO2.** The students after the completion of this course will be able to prepare Audit Reports.

#### **Course 15: Indirect Taxes with GST**

**CO1.** Understand and apply the concept of GST.

**CO2.** The students after the completion of this course will be able to understand and apply the concept of Excise duty, CENVAT.

**CO3.** The students after the completion of this course will be able to understand and apply the knowledge of Registration under GST including its procedures & the liable person for GST registration.

#### **Course 16: Management Accounting**

**CO1.** The students after the completion of this course will be able to understand and apply the basic knowledge of management accounting & its relevance in a business organization.

**CO2.** The students after the completion of this course will be able to understand and apply managerial behavior & control structures prevalent under varied business environment.

#### **Course 17: Fundamental of Insurance**

**CO1.** The students after the completion of this course will be able to understand and apply the fundamentals of insurance.

**CO2.** The students after the completion of this course will be able to understand and apply the knowledge of life Insurance, Fire Insurance & Marine Insurance.

**CO3.** The students after the completion of this course will be able to understand and apply the functions of Insurance agent.

#### **Course 18: Money and Banking**

**CO1.** The students after the completion of this course will be able to understand and apply the fundamentals of banking.

**CO2.** The students after the completion of this course will be able to understand and apply the banking business & practices.

**CO3.** The students after the completion of this course will be able to understand and apply the new concepts introduced in the banking system.



## DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



---

### **B.Sc. (Maths Group) – 3 years Undergraduate programme**

#### **Programme Outcomes (PO)**

**PO1.** The undergraduate programme in Mathematics / Physics / Chemistry is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Mathematics / Physics / Chemistry becomes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

**PO2.** It is desired that undergraduate programme in Mathematics / Physics / Chemistry besides teaching the basic concepts of Mathematics / Physics / Chemistry should in addition have broader vision for students so that the students therefore be exposed to societal interface of Mathematics / Physics / Chemistry and the role of Mathematics / Physics / Chemistry in the development of physical, chemical and mathematical sciences & technologies.

**PO3.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**PO4.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

**PO5.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**PO6.** The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

**PO7.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**PO8.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**PO9.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued

self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

**PSO1.** The students after the completion of this programme will be able to understand and apply the fundamentals of Mechanics, Oscillation and Properties of Matter.

**PSO2.** The students after the completion of this programme will be able to understand and apply the fundamentals of Electricity, Magnetism and Electromagnetic Theory.

**PSO3.** The students after the completion of this programme will be able to understand and apply the fundamentals of Thermodynamics, Kinetic Theory and Statistical Physics.

**PSO4.** The students after the completion of this programme will be able to understand and apply the fundamentals of Wave, Acoustics and Optics.

**PSO5.** The students after the completion of this programme will be able to understand and apply the fundamentals of Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics.

**PSO6.** The students after the completion of this programme will be able to understand and apply the fundamentals of Solid State Physics, Solid State Devices and Electronics.

**PSO7.** The students after the completion of this programme will be able to understand and apply the fundamentals of Algebra & Trigonometry.

**PSO8.** The students after the completion of this programme will be able to understand and apply the fundamentals of Calculus.

**PSO9.** The students after the completion of this programme will be able to understand and apply the fundamentals of Vector Analysis & Geometry.

**PSO10.** The students after the completion of this programme will be able to understand and apply the fundamentals of Advanced Calculus.

**PSO11.** The students after the completion of this programme will be able to understand and apply the fundamentals of Differential Equations.

**PSO12.** The students after the completion of this programme will be able to understand and apply the fundamentals of Mechanics.

**PSO13.** The students after the completion of this programme will be able to understand and apply the fundamentals of Analysis.

**PSO14.** The students after the completion of this programme will be able to understand and apply the fundamentals of Abstract Algebra.

**PSO15.** The students after the completion of this programme will be able to understand and apply the fundamentals of Advanced Discrete Mathematics.

**PSO16.** The students after the completion of this programme will be able to understand and apply the fundamentals of Inorganic Chemistry.

**PSO17.**The students after the completion of this programme will be able to understand and apply the fundamentals of Organic Chemistry.

**PSO18.**The students after the completion of this programme will be able to understand and apply the fundamentals of Physical Chemistry.

### **Course Outcomes (CO)**

#### **Course 1: Mechanics, Oscillation and Properties of Matter**

**CO1.** The students after the completion of this course will be able to understand laws of motion and their application to various dynamical situations, notion of inertial frames and concept of Galilean invariance. Learn the concept of conservation of energy, momentum, angular momentum and apply them to basic problems.

**CO2.** The students after the completion of this course will be able to understand expression for the moment of inertia about the given axis of symmetry for different uniform mass distributions.

**CO3.** The students after the completion of this course will be able to understand and apply the principles of elasticity, viscosity and surface tension.

**CO4.** The students after the completion of this course will be able to understand and apply Kepler's law to describe the motion of planets and satellite in circular orbit, through the study of law of Gravitation.

**CO5.** The students after the completion of this course will be able to explain the phenomena of simple harmonic motion and the properties of systems executing such motions.

#### **Course 2: Electricity, Magnetism and Electromagnetic Theory**

**CO1.** The students after the completion of this course will be able to demonstrate Gauss law, Coulomb's law for the electric field, and apply it to systems of point charges as well as line, surface, and volume distributions of charges.

**CO2.** The students after the completion of this course will be able to demonstrate a working understanding of capacitors.

**CO3.** The students after the completion of this course will be able to describe the magnetic field produced by magnetic dipoles and electric currents and explain Faraday-Lenz and Maxwell laws to articulate the relationship between electric and magnetic fields.

**CO4.** The students after the completion of this course will be able to apply various network theorems and their applications.

#### **Course 3: Thermodynamics, Kinetic Theory and Statistical Physics**

**CO1.** The students after the completion of this course will be able to describe the basic concepts of laws of thermodynamics, the concept of entropy and the associated theorems, the thermodynamic potentials and their physical interpretations.

**C02.** The students after the completion of this course will be able to describe about Maxwell's thermodynamic relations.

**C03.** The students after the completion of this course will be able to describe the basic aspects of kinetic theory of gases, Maxwell-Boltzmann distribution law, equipartition of energies, mean free path of molecular collisions etc.

**C04.** The students after the completion of this course will be able to describe the about the real gas equations, Vander Waal equation of state, the Joule- Thompson effect etc.

#### **Course 4: Wave, Acoustics and Optics**

**C01.** The students after the completion of this course will be able to describe the principle of superposition of waves and thus describe the formation of standing waves.

**C02.** The students after the completion of this course will be able to apply basic knowledge of principles and theories about the behavior of light and the physical environment to conduct experiments.

**C03.** The students after the completion of this course will be able to use the principles of wave motion and superposition to explain the physics of polarization, interference and diffraction.

**C04.** The students after the completion of this course will be able to describe the working of selected optical instruments like biprism, interferometer, diffraction grating, and holograms.

**C05.** The students after the completion of this course will be able to describe the spontaneous and stimulated emission of radiation, optical pumping and population inversion as well as Ruby laser and He- Ne laser.

#### **Course 5: Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics**

**C01.** The students after the completion of this course will be able to describe the main aspects of the inadequacies of classical mechanics and understand historical development of quantum mechanics and ability to discuss and interpret experiments that reveal the dual nature of matter.

**C02.** The students after the completion of this course will be able to describe the theory of quantum measurements, wave packets and uncertainty principle.

**C03.** The students after the completion of this course will be able to describe the central concepts of quantum mechanics and the Schrodinger equations.

**C04.** The students after the completion of this course will be able to describe the properties of nuclei and structure of atomic nucleus.

**C05.** The students after the completion of this course will be able to calculate the decay rates and lifetime of radioactive decays.

**C06.** The students after the completion of this course will be able to describe the fission

and fusion as well as nuclear processes to produce nuclear energy in nuclear reactor and stellar energy in stars. The student will also learn classification of elementary particles.

### **Course 6: Solid State Physics, Solid State Devices and Electronics**

**C01.** The students after the completion of this course will be able to describe the crystalline and amorphous substances and diffraction of X-rays by crystalline materials.

**C02.** The students after the completion of this course will be able to describe the lattice vibrations, phonons and in depth of knowledge of Einstein and Debye theory of specific heat of solids.

**C03.** The students after the completion of this course will be able to describe the band theory of solids and must be able to differentiate insulators, conductors and semiconductors.

**C04.** The students after the completion of this course will be able to describe the N- and P-type semiconductors, P-N junctions, application of PN junction for different type of rectifiers and voltage regulators.

**C05.** The students after the completion of this course will be able to describe the PNP and NPN transistors and their applications as amplifiers and oscillators.

**C06.** The students after the completion of this course will be able to learn basic of logic gater.

### **Course 7: Algebra & Trigonometry**

**C01.** The students after the completion of this course will be able to describe Group theory, Ring theory, Vector Space, Modules.

**C02.** The students after the completion of this course will be able to find the inverse of matrix, Canonical form and apply the Cayley – Hamilton theorem.

**C03.** The students after the completion of this course will be able to describe that every problem can be solved as every theorem in Group theory and Ring theory has its proof and solution.

**C04.** The students after the completion of this course will be able to apply de-moivre's theorem to solve related problems.

### **Course 8: Calculus**

**C01.** The students after the completion of this course will be able to test the continuity and differentiability of functions of one variable.

**C02.** The students after the completion of this course will be able to calculate and solve the definite and indefinite integrals.

**C03.** The students after the completion of this course will be able to find the Maclaurin and Taylor's series of functions at any value.

## **Course 9: Vector Analysis & Geometry**

**C01.** The students after the completion of this course will be able to determine & calculate vector and scalars, dot and cross products.

**C02.** The students after the completion of this course will be able to solve and verify Gauss, Green and Stokes theorem.

**C03.** The students after the completion of this course will be able to solve Vector Integration and differentiation.

**C04.** The students after the completion of this course will be able to describe Cone, Sphere, Cylinder, Generating Lines, Straight line, Plane etc. Course 10: Advanced Calculus

**C01.** The students after the completion of this course will be able to determine the series and alternating series. Different types of tests to solve the series.

**C02.** The students after the completion of this course will be able to determine Jacobian of two and three variables.

**C03.** The students after the completion of this course will be able to find the limit of a function of one and two and test its continuity and differentiability.

**C04.** The students after the completion of this course will be able to determine the Beta – Gamma functions and solve the double and triple integrations.

## **Course 11: Differential Equations**

**C01.** The students after the completion of this course will be able to solve the ordinary and partial differential equations.

**C02.** The students after the completion of this course will be able to compute the Laplace and Inverse Laplace transformation of the given equation.

**C03.** The students after the completion of this course will be able to describe and solve differential equations.

## **Course 12: Mechanics**

**C01.** The students after the completion of this course will be able to find the velocity and acceleration of a moving particle.

**C02.** The students after the completion of this course will be able to compute the equilibrium condition of particle.

**C03.** The students after the completion of this course will be able to describe the attraction and potential of different particles (Moving and Static)

## **Course 13: Analysis**

**C01.** The students after the completion of this course will be able to determine the Fourier series of full and half range of any function of one variable.



**C02.** The students after the completion of this course will be able to apply Schwarz and Young's theorem on various functions.

**C03.** The students after the completion of this course will be able to analyze all type of trigonometric real functions.

#### **Course 14: Abstract Algebra**

**C01.** The students after the completion of this course will be able to use various forms of "Sylow theorem" to identify the whole structure of group.

**C02.** The students after the completion of this course will be able to analyze Groups, Sub-groups, Normal Sub-groups, and Semi-groups etc.

**C03.** The students after the completion of this course will be able to determine inner product of two Vectors, and Inner product space.

**C04.** The students after the completion of this course will be able to analyze Vector space, Ring, their types, modules, ideals etc.

#### **Course 15: Advanced Discrete Mathematics**

**C01.** The students after the completion of this course will be able to describe Graphs, Trees, Spanning Trees, Circuits, finite state machine and their types.

**C02.** The students after the completion of this course will be able to describe the difference between Mealy and Moore machine.

**C03.** The students after the completion of this course will be able to compute the output of a finite state machine corresponding to their next state of the given input.

#### **Course 16: Inorganic Chemistry**

**C01.** The students after the completion of this course will be able to describe Atomic Structure, Periodic Properties.

**C02.** The students after the completion of this course will be able to describe Chemical Bonding.

**C03.** The students after the completion of this course will be able to describe S-Block Elements, Chemistry of Noble Gases.

**C04.** The students after the completion of this course will be able to describe P-Block Elements, Inorganic Chemical Analysis.

**C05.** The students after the completion of this course will be able to describe Chemistry of Elements of First Transition Series.

**C06.** The students after the completion of this course will be able to describe Chemistry of Elements of Second & Third Transition Series.

**C07.** The students after the completion of this course will be able to describe Oxidation and

Reduction, Coordination Compounds.

**C08.** The students after the completion of this course will be able to describe Chemistry of Lanthanide Elements, Chemistry of Actinides.

**C09.** The students after the completion of this course will be able to describe Acids and Bases, Non- Aqueous Solvents.

**C010.** The students after the completion of this course will be able to describe Metal-Ligand Bonding in Transition Metal Complexes.

**C011.** The students after the completion of this course will be able to describe Magnetic Properties of Transition Metal Complexes.

**C012.** The students after the completion of this course will be able to describe Organometallic Chemistry.

**C013.** The students after the completion of this course will be able to describe Bioinorganic Chemistry.

**C014.** The students after the completion of this course will be able to describe Hard and Soft Acids and Bases (HSAB).

### **Course 17: Organic Chemistry**

**C01.** The students after the completion of this course will be able to describe Electronic structure & bonding, mechanism of organic reactions.

**C02.** The students after the completion of this course will be able to describe Stereochemistry of organic compounds.

**C03.** The students after the completion of this course will be able to describe Aliphatic and aromatic ring compounds.

**C04.** The students after the completion of this course will be able to describe Alkenes, dienes and alkynes.

**C05.** The students after the completion of this course will be able to describe Arenes and

aromaticity. **C06.** The students after the completion of this course will be able to describe

Alcohols, phenols, epoxides. **C07.** The students after the completion of this course will be able to describe Aldehydes and ketones.

**C08.** The students after the completion of this course will be able to describe Carboxylic acids, substituted carboxylic acids, and carboxylic acid derivatives.

**C09.** The students after the completion of this course will be able to describe Organic compounds of nitrogen.

**C010.** The students after the completion of this course will be able to describe Heterocyclic

compounds, amino acids and peptides.

**C011.** The students after the completion of this course will be able to describe organometallic compounds, organosulphur compounds, and organic synthesis via enolates.

**C012.** The students after the completion of this course will be able to describe Biomolecules, carbohydrates, proteins and nucleic acids.

**C013.** The students after the completion of this course will be able to describe Synthetic polymers, synthetic dyes.

**C014.** The students after the completion of this course will be able to describe Spectroscopy, mass spectroscopy, infra-red spectroscopy, uv-visible spectroscopy, nmr-spectroscopy, cmr-spectroscopy, magnetic resonance imaging (MRI).

### **Course 18: Physical Chemistry**

**C01.** The students after the completion of this course will be able to describe Mathematical concepts for chemist and computer.

**C02.** The students after the completion of this course will be able to describe Molecular velocities.

**C03.** The students after the completion of this course will be able to describe Liquid state.

**C04.** The students after the completion of this course will be able to describe Liquid crystals, colloidal state, and solid state.

**C05.** The students after the completion of this course will be able to describe Chemical kinetics, catalysis.

**C06.** The students after the completion of this course will be able to describe Thermo chemistry.

**C07.** The students after the completion of this course will be able to describe Laws of thermodynamics.

**C08.** The students after the completion of this course will be able to describe Phase equilibrium.

**C09.** The students after the completion of this course will be able to describe Electrochemistry.

**C010.** The students after the completion of this course will be able to describe Electrochemical cell or galvanic cell.

**C011.** The students after the completion of this course will be able to describe Quantum mechanics.

**C012.** The students after the completion of this course will be able to describe Quantum mechanical approach of molecular orbit theory.

**C013.** The students after the completion of this course will be able to describe Spectroscopy, electromagnetic radiation, vibrational spectra, and Raman spectra.

**C014.** The students after the completion of this course will be able to describe Electronic spectra, photo- chemistry.

**C015.** The students after the completion of this course will be able to describe Thermodynamics, physical properties and molecular structure, magnetic properties.

---

## **B.Sc. (Bio Group) – 3 years Undergraduate programme**

### **Programme Outcomes (PO)**

**PO1.** The undergraduate programme in Zoology / Botany / Microbiology is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Zoology / Botany / Microbiology becomes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

**PO2.** The undergraduate programme in Zoology / Botany / Microbiology besides teaching the basic concepts of Zoology / Botany / Microbiology should in addition have broader vision for students so that the students therefore be exposed to societal interface of Zoology / Botany / Microbiology and the role of Zoology / Botany / Microbiology in the development of biological sciences.

**PO3.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**PO4.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

**PO5.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**PO6.** The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

**PO7.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**PO8.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**PO9.** The students will be able to engage themselves in life-long self-determining and

learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

**PSO1.** The students after the completion of this programme will be able to understand and apply the knowledge of Cell Biology & Invertebrates.

**PSO2.** The students after the completion of this programme will be able to understand and apply the knowledge of Vertebrates & Embryology.

**PSO3.** The students after the completion of this programme will be able to understand and apply the knowledge of Anatomy & Physiology.

**PSO4.** The students after the completion of this programme will be able to understand and apply the knowledge of Vertebrate Endocrinology, Reproductive Biology Behavior, Evolution and Applied Zoology.

**PSO5.** The students after the completion of this programme will be able to understand and apply the knowledge of Ecology, Environmental biology; Toxicology; Microbiology and Medical Zoology.

**PSO6.** The students after the completion of this programme will be able to understand and apply the knowledge of Genetics, Cell Physiology, Biochemistry, Biotechnology and Bio-techniques.

**PSO7.** The students after the completion of this programme will be able to understand and apply the knowledge of General Diversity of Microbes and Cryptogams.

**PSO8.** The students after the completion of this programme will be able to understand and apply the knowledge of Cell Biology and Genetics.

**PSO9.** The students after the completion of this programme will be able to understand and apply the knowledge of Diversity of Seed Plants and their Systematics.

**PSO10.** The students after the completion of this programme will be able to understand and apply the knowledge of Structure Development and Reproduction in Flowering Plants.

**PSO11.** The students after the completion of this programme will be able to understand and apply the knowledge of Plant Physiology, Biochemistry and Biotechnology.

**PSO12.** The students after the completion of this programme will be able to understand and apply the knowledge of Ecology and Utilization of Plants.

**PSO13.** The students after the completion of this programme will be able to understand and apply the knowledge of General Microbiology.

**PSO14.** The students after the completion of this programme will be able to understand and apply the fundamentals of Biochemistry and Immunology.

**PSO15.** The students after the completion of this programme will be able to understand and apply the fundamentals of Microbial Physiology and Genetics.

**PSO16.** The students after the completion of this programme will be able to understand and apply the fundamentals of Principles of Bioinstrumentation and Techniques.

**PSO17.** The students after the completion of this programme will be able to understand and apply the fundamentals of Molecular Biology and Genetic Engineering.

**PSO18.** The students after the completion of this programme will be able to understand and apply the fundamentals of Environmental and Medical Microbiology.

### **Course Outcomes (CO)**

#### **Course 1: Cell Biology & Invertebrates**

**CO1.** The students after the completion of this course will be able to describe Prokaryotic & Eukaryotic Cells.

**CO2.** The students after the completion of this course will be able to describe Cell divisions (Mitosis & Meiosis).

**CO3.** The students after the completion of this course will be able to describe general characteristics & classification of invertebrates.

**CO4.** The students after the completion of this course will be able to describe

Helminthes & Annelida. **CO5.** The students after the completion of this course will be

able to describe Mollusca, Protochordata. **Course 2: Vertebrates & Embryology**

**CO1.** The students after the completion of this course will be able to describe the origin and classification of Chordates.

**CO2.** The students after the completion of this course will be able to describe Fishes, Amphibia & Reptilia.

**CO3.** The students after the completion of this course will be able to describe Aves & Mammals.

**CO4.** The students after the completion of this course will be able to describe Gametogenesis, Fertilization & Parthenogenesis, and Development of frog upto formation of three germ layers.

**CO5.** The students after the completion of this course will be able to describe development of Chick upto formation of three germ layers, Extra embryonic membranes, Placenta in mammals.

#### **Course 3: Anatomy & Physiology**

**CO1.** The students after the completion of this course will be able to describe anatomy of various organ systems of vertebrates - Integument and its derivatives, structure of scales, hair and feathers; Alimentary canal and digestive glands in vertebrates; Respiratory Organs, Gills and lungs; Air-Sac in birds.

**C02.** The students after the completion of this course will be able to describe endoskeleton-limbs, girdles and vertebrae; Circulatory System - Evolution of heart and aortic arches; Urogenital System - Kidney and excretory ducts.**C03.** The students after the completion of this course will be able to describe nervous system - general plan of brain and spinal cord; Endocrine glands - classification and histology; Gonads and genital ducts.

**C04.** The students after the completion of this course will be able to describe digestion and absorption of dietary components; physiology of heart, cardiac cycle and ECG; blood coagulation; respiration- mechanism and control of breathing.

**C05.** The students after the completion of this course will be able to describe physiology of excretion, osmoregulation; physiology of muscle contraction; physiology of nerve impulse; synaptic transmission; ear and eye - structure and function.

#### **Course 4: Vertebrate Endocrinology, Reproductive Biology Behavior, Evolution and Applied Zoology**

**C01.** The students after the completion of this course will be able to describe general characters of hormones, hormone receptors, biosynthesis and secretion of thyroid, adrenal, ovarian and testicular hormones, endocrine disorder due to hormones and other glands.

**C02.** The students after the completion of this course will be able to describe reproductive cycle in vertebrates, menstruation, lactation and pregnancy, mechanism of parturition, hormonal regulation of gametogenesis, extra embryonic membrane.

**C03.** The students after the completion of this course will be able to describe evidences of organic evolution, theories of organic evolution, variation, mutation, isolation and natural selection, evolution of horse.

**C04.** The students after the completion of this course will be able to describe ethology, patterns of behavior taxes, reflexes, drives and stereotyped behavior, reproductive behavioral patterns, hormones, drugs and behavior.

**C05.** The students after the completion of this course will be able to describe aquaculture, sericulture, apiculture, pisciculture, poultry keeping, elements of pest control - chemical control & biological control.

#### **Course 5: Ecology, Environmental biology; Toxicology; Microbiology and Medical Zoology**

**C01.** The students after the completion of this course will be able to describe aims and scopes of ecology, major ecosystems of the world, population- characteristics and regulation of densities, communities and ecosystems, biogeochemical cycles, air and water pollution, ecological succession.

**C02.** The students after the completion of this course will be able to describe environmental biology, laws of limiting factors, food chain in a freshwater ecosystem, energy flow in ecosystem-trophic levels, conservation of natural resources, environmental

impact assessment.

**C03.** The students after the completion of this course will be able to describe toxicology, definition of toxicity, classification of toxicants, principle of systematic toxicology, toxic agents and their action- metallic and inorganic agents, animal poisons - snake-venom, scorpion and bee poisoning, food poisoning.

**C04.** The students after the completion of this course will be able to describe microbiology, general and applied microbiology, microbiology of domestic water and sewage, microbiology of milk and milk products, industrial microbiology.

**C05.** The students after the completion of this course will be able to describe medical microbiology, brief introduction to pathogenic micro-organisms, rickettsia, spirochaetes and bacteria, brief account of life- history and pathogenicity of the following pathogens with reference to man; prophylaxis and treatment -

pathogenic protozoans - entamoeba, trypanosoma, and giardia, pathogenic helminths- schistosoma, nematode pathogenic parasites of man, vector insects.

### **Course 6: Genetics, Cell Physiology, Biochemistry, Biotechnology and Bio-techniques**

**C01.** The students after the completion of this course will be able to describe genetics, linkage and linkage maps, varieties of gene expression - multiple alleles; lithogenesis; pleiotropic genes; gene interaction; epistasis, sex-chromosome systems, and sex-linkage, mutation and chromosomal alterations; meiotic consequences, human genetics - chromosomal and single gene disorders (somatic cell genetics).

**C02.** The students after the completion of this course will be able to describe cell physiology, general idea about pH and buffer, transport across membrane - cell membrane; mitochondria and endoplasmic reticulum, active transport and its mechanism; active transport in mitochondria and endoplasmic reticulum, hydrolytic enzymes - their chemical nature, activation and specificity.

**C03.** The students after the completion of this course will be able to describe biochemistry, amino acids and peptides - basic structure and biological function, carbohydrate and its metabolism - glycogenesis; gluconeogenesis; glycolysis, glycogenolysis; Kreb's cycle, lipid metabolism - oxidation of glycerol; oxidation of fatty acid, protein metabolism - deamination, transamination, transmethylation; biosynthesis of protein.

**C04.** The students after the completion of this course will be able to describe biotechnology - scope and importance, recombinant DNA and gene cloning, cloned genes and other tools of biotechnology, applications of biotechnology in pharmaceutical industry, and food processing industry.

**C05.** The students after the completion of this course will be able to describe biotechniques principles and techniques of pH meter, colorimeter, microscopy-light microscopes, phase contrast and electron microscopes, centrifugation, separation of



biomolecules by chromatography and electrophoresis, biochemical methods for determination of protein, lipids, and carbohydrates.

### **Course 7: General Diversity of Microbes and Cryptogams**

**CO1.** The students after the completion of this course will be able to describe Viruses and Bacteria: General account of viruses and mycoplasma; bacteria structure; nutrition, reproduction and economic importance; general account of cyanobacteria.

**CO2.** The students after the completion of this course will be able to describe Algae: General characters, classification and economic importance; important features and life history of Chlorophyceae-Volvox, Oedogonium, Coleochaete; Xanthophyceae- Vaucheria; Phaeophyceae- Ectocarpus, Sargassum; Rhodophyceae- Polysiphonia.

**CO3.** The students after the completion of this course will be able to describe Fungi: General characters, classification and economic importance; important features and life history of Mastigomycotina- Pythium, Phytophthora; Zygomycotina- Mucor, Ascomycotina-Saccharomyces, Eurotium, Chaetomium, Peziza; Basidiomycotina- Puccinia, Agaricus; Deuteromycotina-Cercospora, Colletotrichum; general account of Lichens.

**CO4.** The students after the completion of this course will be able to describe Bryophyta: Amphibians of plant kingdom displaying alternation of generations; structure, reproduction and classification of Hepaticopsida (e.g. RicciaMarchantia); Anthocerotopsida (e.g. Anthoceros), Bryopsida (e.g. Funaria)

**CO5.** The students after the completion of this course will be able to describe Pteridophyta: The first vascular plants; important characteristics of Psilopsida, Lycopsida, Sphenopsida and Pteropsida; structure, Reproduction in Rhynia, LycopodiumSelaginella, Equisetum, Pteris and Marsilea.

### **Course 8: Cell Biology and Genetics**

**CO1.** The students after the completion of this course will be able to describe the Cell: Envelope; Plasma membrane; bilayer lipid structure; functions; the cell wall, Ultra structure and function of nucleus: nuclear membrane; nucleolus and other organelles: Golgi bodies, ER, peroxisomes, Vacuoles.

**CO2.** The students after the completion of this course will be able to describe Chromosome organization: Morphology; centromere and telomere; chromosome alterations; deletions, duplications, translocations, inversions; variations in chromosome number aneuploidy, polyploidy; sex chromosomes, Cell division: Mitosis; meiosis.

**CO3.** The students after the completion of this course will be able to describe DNA the genetic material: DNA structure; replication; DNA- protein interaction; the nucleosome model; genetic code; satellite and repetitive DNA, Extra nuclear genome: Presence and function of mitochondrial and plastid DNA; plasmids.

**CO4.** The students after the completion of this course will be able to describe Gene expression: Structure of gene; transfer of genetic information; transcription, translation, protein synthesis; tRNA; ribosomes; regulation of gene expression in prokaryotes and

eukaryotes; proteins - 1D, 2D and 3D structures.

**C05.** The students after the completion of this course will be able to describe Genetic Variations: Mutations, spontaneous and induced; transposable genetic elements; DNA damage and repair: Genetic inheritance: Mendelism; laws of segregation and independent assortment: linkage analysis; allelic and non-allelic interactions.

### **Course 9: Diversity of Seed Plants and their Systematics**

**C01.** The students after the completion of this course will be able to describe characteristics of seed plants; evolution of the seed habit; seed plants with (angiosperms) and without (gymnosperms) fruits; fossil and living seed plants, general features of gymnosperms and their classification; evolution and diversity of gymnosperms; geological time scale, fossilization and fossil gymnosperms.

**C02.** The students after the completion of this course will be able to describe morphology of vegetative and reproductive parts; anatomy of roots, stem and leaf, reproduction and life cycle of Pinus, Cycas and Ephedra.

**C03.** The students after the completion of this course will be able to describe angiosperms: origin and evolution, some examples of primitive angiosperms, angiosperms taxonomy: brief history, aims and fundamental components; identification, keys taxonomic literature, botanical nomenclature: principles and rules; taxonomic ranks; type concept; principle of priority.

**C04.** The students after the completion of this course will be able to describe classification of angiosperms; salient features of the systems proposed by Bentham and Hooker and Engler and Prantl, major contributions of cytology, phytochemistry and taxometrics to taxonomy.

**C05.** The students after the completion of this course will be able to describe diversity of flowering plants: general account of the families- Ranunculaceae, Brassicaceae, Malvaceae, Rutaceae, Fabaceae, Apiaceae, Acanthaceae, Apocynaceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

### **Course 10: Structure Development and Reproduction in Flowering Plants**

**C01.** The students after the completion of this course will be able to describe the basic body plan of a flowering plant: modular type of growth, diversity in plant form in annuals, biennials and perennials;

convergence of evolution of tree habit in gymnosperms, monocotyledons and dicotyledons; trees-largest and longest-lived organisms.

**C02.** The students after the completion of this course will be able to describe the shoot system: the shoot apical meristem and its histological organization; vascularization of primary shoot in monocotyledons and dicotyledons; formation of internodes, branching pattern; monopodial and sympodial growth canopy architecture; cambium and its functions; formation of secondary xylem, a general account of wood structure in relation to conduction of water and minerals; characteristics of growth rings, sapwood and heart

wood; role of woody skeleton; secondary phloem – structure, function, relationships, periderm.

**C03.** The students after the completion of this course will be able to describe leaf: origin, development, arrangement and diversity in size and shape; internal structure in relation to photosynthesis and water loss; adaptations to water stress; senescence and abscission, the root system: the root apical meristem; differentiation of primary and secondary tissues and their roles; structural modification for storage, respiration, reproduction and for interaction with microbes.

**C04.** The students after the completion of this course will be able to describe flower: a modified shoot; structure, development and varieties of flower, functions, structure of anther and pistil, the male and female gametophytes; types of pollination; attractions and rewards for pollinators; pollen-pistil interaction, self incompatibility, double fertilization, formation of seed-endosperm and embryo; fruit development and maturation.

**C05.** The students after the completion of this course will be able to describe significance of seed: suspended animation; ecological adaptation; unit of genetic recombination and replenishment, dispersal strategies, vegetative reproduction: vegetative propagation, grafting, economic aspects.

### **Course 11: Plant Physiology, Biochemistry and Biotechnology**

**C01.** The students after the completion of this course will be able to describe plant-water relations: importance of water to plant life; physical properties of water; diffusion and osmosis; absorption, transport of water and transpiration; physiology of stomata, mineral nutrition: essential macro and micro-elements and their role; mineral uptake; deficiency and toxicity symptoms.

**C02.** The students after the completion of this course will be able to describe transport of organic substances: mechanism of phloem transport; source-sink relationship; factors affecting translocation, basic of enzymology: discovery and nomenclature; characteristics of enzymes; concept of holoenzyme, apoenzyme, coenzyme and cofactors; regulation of enzyme activity, mechanism of action, photosynthesis: significance; historical aspects; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems; Z-scheme; photo-phosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration.

**C03.** The students after the completion of this course will be able to describe respiration: ATP - the biological energy currency; aerobic and anaerobic respiration; Krebs's cycle, electron transport mechanism (chemi-osmotic theory); redox potential; oxidative phosphorylation; pentose phosphate pathway, Nitrogen and lipid metabolism: Biology of nitrogen fixation; importance of nitrate reductase and its regulations; ammonium assimilation; structure and function of lipids; fatty acid biosynthesis; Beta- oxidation; saturated and unsaturated fatty acids; storage and mobilization of fatty acids.

**C04.** The students after the completion of this course will be able to describe growth and development: definitions; phases of growth and development; kinetics of growth, seed

dormancy, seed germination and factors of their regulation; plant movements; the concept of photoperiodism; physiology of flowering; florigen concept; biological clocks; physiology of senescence, fruit ripening; plant hormones auxins, gibberellins, cytokinins, abscisic acid and ethylene, history of their discovery, biosynthesis and mechanism of action; photomorphogenesis; phytochromes and cryptochromes, their discovery, physiological role and mechanism of action.

**C05.** The students after the completion of this course will be able to describe genetic engineering: tools and techniques of recombinant DNA technology; cloning vectors; genomic and cDNA library; transposable elements; techniques of gene mapping and chromosome walking, biotechnology: functional definition; basic aspects of plant tissue culture; cellular totipotency, differentiation and morphogenesis; biology of *Agrobacterium*; vectors for gene delivery and marker genes; salient achievements in crop biotechnology.

### **Course 12: Ecology and Utilization of Plants**

**C01.** The students after the completion of this course will be able to describe plants and environment: atmosphere (gaseous composition), water (properties of water cycle), light (global radiation, photosynthetically active radiation), temperature, soil (development, soil profiles, physico-chemical properties), and biota, Morphological, anatomical and physiological responses of plants to water (hydro- phytes and xerophytes), temperature (thermoperiodicity), light (photoperiodism, heliophytes and sciophytes) and salinity.

**C02.** The students after the completion of this course will be able to describe community ecology: community characteristics, frequency, density, cover, life forms biological spectrum; ecological succession, ecosystems: structure, abiotic and biotic components; food chain, food web, ecological pyramids, energy flow; biogeochemical cycles of carbon, nitrogen and phosphorus.

**C03.** The students after the completion of this course will be able to describe population ecology: growth curves; ecotypes; ecads, biogeographical regions of India, Vegetation types of India: Forests and grasslands.

**C04.** The students after the completion of this course will be able to describe utilization of plants food plants: rice, wheat, maize, potato, sugarcane, fibers: cotton and jute, vegetable oils: groundnut, mustard and coconut, general account of sources of firewood, timber and bamboos.

**C05.** The students after the completion of this course will be able to describe Spices, Medicinal plants, Beverages- Tea and coffee, Rubber.

### **Course 13: General Microbiology**

**C01.** The students after the completion of this course will be able to describe unity of microbial world, scope of microbiology, microbiology and human health, beneficial and harmful microbes, development of microbiology (contributions and pioneers).

**C02.** The students after the completion of this course will be able to describe diversity of

microbial world: principle of classification, classification of viruses, bacteria (including cyanobacteria) algae and fungi (including yeast) and protozoa.

**C03.** The students after the completion of this course will be able to describe methods of studying microorganism: origin of microbes, microscopy, pure culture techniques, sterilization, aseptic techniques, isolation of pure culture, conditions and media for growth of microorganisms in the laboratory.

**C04.** The students after the completion of this course will be able to describe general organization of microbes; structural functional organization and economic importance of algae (Nostoc, anabaena, Ocillitoria), fungi (Rhizopus, Penicillium, Aspergillus), yeast and lichens.

**C05.** The students after the completion of this course will be able to describe structure, functional organization and economic importance of bacteria (Gram +ve and Gram -ve), viruses (plant and animal) and protozoa (Ciliates, Flagellates and Sporozoans).

## **B.A.– 3 years Undergraduate programme**

### **Programme Outcomes (PO)**

**PO1.** The undergraduate programme in Hindi Literature / English Literature / Economics / Political Science / History / Sociology / Home Science is aimed at providing the students necessary inputs so as to set forth the task of bringing about new and innovative ideas/concepts so that the formulated model curricula in Hindi Literature / English Literature / Economics / Political Science / History / Sociology / Home Science comes in tune with the changing scenario and incorporate new and rapid advancements and multi-disciplinary skills, societal relevance, global interface, self-sustaining and supportive learning.

**PO2.** The undergraduate programme in Hindi Literature / English Literature / Economics / Political Science / History / Sociology / Home Science should in addition have broader vision for students of development of arts and social sciences.

**PO3.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**PO4.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

**PO5.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**PO6.** The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

**P07.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**P08.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**P09.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

**PSO1.** The students after the completion of this programme will be able to understand and apply the knowledge of प्राचीन हिंदी काव्य

**PSO2.** The students after the completion of this programme will be able to understand and apply the knowledge of हिंदी कथा साहित्य

**PSO3.** The students after the completion of this programme will be able to understand and apply the knowledge of अर्वाचीन हिंदी काव्य

**PSO4.** The students after the completion of this programme will be able to understand and apply the knowledge of हिंदी निबंध तथा अन्य गद्य विधाएं

**PSO5.** The students after the completion of this programme will be able to understand and apply the knowledge of जनपदीय भाषा साहित्य छत्तीसगढ़ी

**PSO6.** The students after the completion of this programme will be able to understand and apply the knowledge of हिंदी भाषा साहित्य का इतिहास तथा काव्यांग

**PSO7.** The students after the completion of this programme will be able to understand and apply the knowledge of Literature in English From 1550-1750 A.D.

**PSO8.** The students after the completion of this programme will be able to understand and apply the knowledge of Literature in English From 1750-1900 A.D.

**PSO9.** The students after the completion of this programme will be able to understand and apply the knowledge of Modern English Literatures - I.

**PSO10.** The students after the completion of this programme will be able to understand and apply the knowledge of Modern English Literatures – II.

**PSO11.** The students after the completion of this programme will be able to understand and apply the knowledge of Indian Writing in English.

**PSO12.** The students after the completion of this programme will be able to understand and apply the knowledge of American Literature.

**PSO13.** The students after the completion of this programme will be able to understand and apply the knowledge of Micro Economics.

**PSO14.** The students after the completion of this programme will be able to understand and apply the knowledge of Indian Economy.

**PSO15.** The students after the completion of this programme will be able to understand and apply the knowledge of Macro Economics.

**PSO16.** The students after the completion of this programme will be able to understand and apply the knowledge of Money, Banking and Public Finance.

**PSO17.** The students after the completion of this programme will be able to understand and apply the knowledge of Development and Environmental Economics.

**PSO18.** The students after the completion of this programme will be able to understand and apply the knowledge of Statistical Methods.

**PSO19.** The students after the completion of this programme will be able to understand and apply the knowledge of Political Theory.

**PSO20.** The students after the completion of this programme will be able to understand and apply the knowledge of Indian Government and Politics.

**PSO21.** The students after the completion of this programme will be able to understand and apply the knowledge of Western Political Thought.

**PSO22.** The students after the completion of this programme will be able to understand and apply the fundamentals of Comparative Politics and Government.

**PSO23.** The students after the completion of this programme will be able to understand and apply the knowledge of International Politics.

**PSO24.** The students after the completion of this programme will be able to understand and apply the knowledge of Public Administration.

**PSO25.** The students after the completion of this programme will be able to understand and apply the knowledge of History of India from the Beginning to 1206 A.D.

**PSO26.** The students after the completion of this programme will be able to understand and apply the knowledge of World History from 1453 to 1890 A.D.

**PSO27.** The students after the completion of this programme will be able to understand and apply the knowledge of History of India from 1206 to 1761 A.D.

**PSO28.** The students after the completion of this programme will be able to understand and apply the knowledge of World History from 1890 to 1964 A.D.

**PSO29.** The students after the completion of this programme will be able to understand and apply the knowledge of History of India from 1761 to 1947 A.D.

**PSO30.** The students after the completion of this programme will be able to understand and apply the knowledge of History of Indian National Movement from 1857AD to 1947AD

**PSO31.** The students after the completion of this programme will be able to understand and apply the knowledge of Introduction to Sociology.

**PS032.** The students after the completion of this programme will be able to understand and apply the knowledge of Contemporary Indian Society.

**PS033.** The students after the completion of this programme will be able to understand and apply the knowledge of Society in India.

**PS034.** The students after the completion of this programme will be able to understand and apply the knowledge of Crime and Society.

**PS035.** The students after the completion of this programme will be able to understand and apply the knowledge of Sociology of Tribal Society.

**PS036.** The students after the completion of this programme will be able to understand and apply the knowledge of Social Research Methods.

**PS053.** The students after the completion of this programme will be able to understand and apply the knowledge of Home Science - Human Development.

**PS054.** The students after the completion of this programme will be able to understand and apply the knowledge of Food & Nutrition Science.

### **Course Outcomes**

#### **(C0) Course 1\_प्राचीन हिंदी काव्य**

**C01.** The students after the completion of this course will be able to contemplate and comprehend कबीर- कांति कुमार जैन

**C02.** The students after the completion of this course will be able to contemplate and comprehend जायसी- संक्षिप्त पद्मावत का नागमती वियोग वर्णन

**C03.** The students after the completion of this course will be able to contemplate and comprehend,सूर-भ्रमरगीत सार,

**C04.** The students after the completion of this course will be able to contemplate and comprehend तुलसी- राम चरित्र मानस.

**C06.** The students after the completion of this course will be able to contemplate and comprehend घनानंद.

**C05.** The students after the completion of this course will be able to contemplate and comprehend विद्यापति, रहीम and रसखान

#### **Course 2: हिंदी कथा साहित्य**

**C01.** The students after the completion of this course will be able to contemplate and comprehend प्रेमचंद का -गबन कफन

**C02.** The students after the completion of this course will be able to contemplate and comprehend जयशंकर प्रसाद का आकाशदीप

**C03.** The students after the completion of this course will be able to contemplate and comprehend यशपाल का पर्द

**C04.** The students after the completion of this course will be able to contemplate and comprehend फणीश्वर नाथ रेणु का ठेस

**C05.** The students after the completion of this course will be able to contemplate and comprehend राकेश मोहन का मलबे का मालिक

**C06.** The students after the completion of this course will be able to contemplate and



comprehend भीष्म साहनी - चीफ की दावत

**C07.** The students after the completion of this course will be able to contemplate and comprehend गुलशेर खान शानी-जली हुई रस्सी

**C08.** The students after the completion of this course will be able to contemplate and comprehend रांगेय राघव-गदल

**C09.** The students after the completion of this course will be able to contemplate and comprehend उपेंद्रनाथ अशक, बाल शौरि रेडी and शिवानी

### **Course 3: अर्वाचीन हिंदी काव्य**

**C01.** The students after the completion of this course will be able to contemplate and comprehend मैथिलीशरण गुप्त- भारत भारती की कविताएं

**C02.** The students after the completion of this course will be able to contemplate and comprehend सूर्यकांत त्रिपाठी निराला- सखि वसंत आया, वर दे वीणावादिनी वर दे, हिंदी के सुमनों के प्रति पत्र, तोड़ती-पत्थर, राजे ने अपनी रखवाली की

**C03.** The students after the completion of this course will be able to contemplate and comprehend सुमित्रानंदन पंत- बादल , परिवर्तन, ताज, झंझा के नीम, भारत माता,

**C04.** The students after the completion of this course will be able to contemplate and comprehend माखनलाल चतुर्वेदी -बली पंथी से, से सांझ और ढोलक की थाप, मैं बेच रही हूं दही, उलाहना, निःशस्त्र सेनानी,

**C05.** The students after the completion of this course will be able to contemplate and comprehend स.ही. वात्स्यायन अज्ञेय- सवेरे उठा तो धूप खिली थी, साम्राज्ञी का नैवेद्य दान, घर, चांदनी जी लो, पूर्वांचल

### **Course 4: हिंदी निबंध तथा अन्य गद्य विधाएं**

**C01.** The students after the completion of this course will be able to contemplate and comprehend भारतेन्दु हरिश्चंद्र- अंधेर नगरी

**C02.** The students after the completion of this course will be able to contemplate and comprehend आचार्य रामचंद्र शुक्ल -क्रोध, डॉ हजारी प्रसाद द्विवेदी -बसंत, डॉ विद्यानिवास मिश्र -उस अमराई ने राम राम कही है, बाबू गुलाब राय - काव्येषु नाट्यम रम्यम and हरिशंकर परसाई- बेईमानी की परत

**C03.** The students after the completion of this course will be able to contemplate and comprehend डॉ रामकुमार वर्मा- औरंगजेब की आखिरी रात, भुनेश्वर -स्ट्राइक, लक्ष्मी नारायण मिश्र -एक दिन, जय शंकर भट्ट- दस हजार and लक्ष्मी नारायण लाल- मम्मी ठकुराइन

**C04.** The students after the completion of this course will be able to contemplate and comprehend राहुल सांकृत्यायन, महादेवी वर्मा and हबीब तनवीर

### **Course 5: जनपदीय भाषा साहित्य छत्तीसगढ़ी**

**C01.** The students after the completion of this course will be able to contemplate and comprehend प्राचीन कवि संत धर्मदास के 3 पद

**C02.** The students after the completion of this course will be able to contemplate and comprehend लखन लाल गुप्त सोनपान

**C03.** The students after the completion of this course will be able to contemplate and comprehend डॉ सत्यभामा आडिल रचित सीख सीख के गोठ

**C04.** The students after the completion of this course will be able to contemplate and comprehend डॉ विनय पाठक का तंय उठथस सूरज उथे,

**C05.** The students after the completion of this course will be able to contemplate and comprehend मुकुंद कौशल -छत्तीसगढ़ी गजल

**C06.** The students after the completion of this course will be able to contemplate and comprehend सुंदरलाल शर्मा , कपिल नाथ कश्यप and रामचंद्र देशमुख

**Course 6: हिंदी भाषा साहित्य का इतिहास तथा काव्यांग विवेचन**

**C01.** The students after the completion of this course will be able to contemplate and comprehend हिंदी भाषा का स्वरूप विकास,

**C02.** The students after the completion of this course will be able to contemplate and comprehend हिंदी साहित्य का इतिहास,

**C03.** The students after the completion of this course will be able to contemplate and comprehend काव्यांग

**Course 7: Literature in English from 1550-1750 A.D.**

**C01.** The students after the completion of this course will be able to demonstrate knowledge of the major texts and traditions of English literature.

**C02.** The students after the completion of this course will be able to contemplate and comprehend different periods of literature and important authors like Shakespeare, Milton, etc of English literature.

**Course 8: Literature in English from 1750-1900 A.D.**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and become familiar with representative literacy and cultural texts with in a significant number of historical and cultural contexts.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and form an idea about the various stages in the development of English literature.

**Course 9: Modern English Literatures - I**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and develop critical thinking through long and short fictions of English literature.

**C02.** The students after the completion of this course will be able to write and appreciate different types of prose of English literature. Course 10: Modern English Literatures – II

**C01.** The students after the completion of this course will be able to familiarize with the plays of master- dramatists and will have developed the ability to appreciate and evaluate different types of plays of English literature.

**C02.** The students after the completion of this course will be able to appreciate and evaluate different types of plays of English literature.

**Course 11: Indian Writing in English**

**C01.** The students after the completion of this course will be able to contemplate and

comprehend and recognize the various phases of the evolution of Indian writing in English.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the thematic concern, genres and trends of Indian writing in English.

### **Course 12: American Literature**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize the cultural themes, literary periods and key artistic features of American Literature.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the various aspects of American Society through a critical examination of the literary texts representing different periods and culture.

### **Course 13: Micro Economics**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize the definitions, nature and scope of economics.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the theory of production and cost.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize the market structure.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize factor pricing.

**C05.** The students after the completion of this course will be able to contemplate and comprehend and recognize welfare economics.

### **Course 14: Indian Economy**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize pre and post independent Indian economy.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in population and human development.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in agriculture.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in industry.

**C05.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in foreign external sector.

## **Course 15: Macro Economics**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize national income & social accounts.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in consumption function.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize the nature and characteristics of trade cycle.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in international trade.

**C05.** The students after the completion of this course will be able to contemplate and comprehend and recognize the functions of IMF, World Bank and WTO.

## **Course 16: Money, Banking and Public Finance**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize basic concepts of money.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the role of economics in commercial banking.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize the meaning and scope of public finance.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize the sources of public revenue and taxation.

**C05.** The students after the completion of this course will be able to contemplate and comprehend and recognize public debt and financial administration.

## **Course 17: Development and Environmental Economics**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize economic growth and development.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship between economics and population problem & growth.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize Harrods and Domar growth model.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize the relationship between economics and environment & ecology. **C05.** The students after the completion of this course will be able to contemplate and comprehend and recognize the concept of intellectual capital.

## **Course 18: Statistical Methods**

**C01.** The students after the completion of this course will be able to comprehend and apply statistical methods in economics.

**C02.** The students after the completion of this course will be able to comprehend and apply the measurement of central tendency in economics.

**C03.** The students after the completion of this course will be able to comprehend and apply the methods & tools of dispersion in economics.

**C04.** The students after the completion of this course will be able to comprehend and apply coefficient of correlation in economics.

**C05.** The students after the completion of this course will be able to comprehend and apply index number and measurement of trend in economics.

## **Course 19: Political Theory**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize the nature and scope of political theory.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize the concept of state, nation and civil society.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize the meaning of organs of government and theory of separation of power.

## **Course 20: Indian Government and Politics**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize the salient features in making of Indian Constitution.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize and appreciate the fundamental rights and duties and the directive principle of state policy.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize and evaluate the evolution, functioning and consequences of political parties in India.

## **Course 21: Western Political Thought**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize the nature, methods and significance of political thought.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize and appreciate various social and political ideas of political thinkers.

**CO3.** The students after the completion of this course will be able to contemplate and comprehend and recognize and demonstrate the knowledge of political thinkers and political concepts.

#### **Course 22:Comparative Politics and Government**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess presidential and parliamentary system.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize the difference between federal and unitary systems of government.

#### **Course 23:International Politics**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess the international political system.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize the relations of India with neighboring countries.

#### **Course 24:Public Administration**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize and critically assess the administrative system of the nation.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize various concepts in public administration.

#### **Course 25: History of India from the Beginning to 1206 A.D**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize India's geographical structure, historical and archeological sources, Stone Age, Harappa civilization.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize Vedic era, Mahajanapada era, Jainism, Buddhism, Alexander's Invasion,

**CO3.** The students after the completion of this course will be able to contemplate and comprehend and recognize Chola dynasty, Pandian dynasty, Gupta dynasty, Pallava dynasty, Chalukya dynasty, Vardhan dynasty.

**CO4.** The students after the completion of this course will be able to contemplate and comprehend and recognize historical relation between India & Srilanka, invasions by Mohammad Bin Kasim, Mohammad Ghazhvani, Mohammad Gauri, caste system, societal status of women – marriage system, sati system, pardah system, devdasi system, dasa system.

C05.Students will be able to demonstrate a breadth of training across historical time and space.Students will be able to develop an in-depth understanding of a field, theme or region.

## **Course 26: World History from 1453 to 1890 A.D.**

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize end of feudalism, Renaissance, religious reforms, rise of nation states – England, France, Spain, Russia, division of Poland.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize modern western world – revolution in commerce & trade - Capitalism, industrial revolution.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize beginning of colonialism, civil war in England, glorious revolution, America's war of Independence, French revolution

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize French revolution – National convention, Napoleon Bonaparte – rise & fall.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize French revolution – National convention, Napoleon Bonaparte – rise & fall.

## **Course 27: History of India from 1206 to 1761 A.D.**

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize Sultanate rule, Slave dynasty, Khilji dynasty, Tughlaq dynasty, Taimur's Invasion.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize Babur's Mughal dynasty, Sher Shah Suri administration, policies of Akbar to Aurangzeb, Mughal administration.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize socio-economic aspects of Sultanate era, socio-economic aspects of Mughal era, religious and cultural aspects of medieval era – Bhakti movement, Sufism, art & establishment in Sultanate era, art & establishment in Mughal era, education & literature in Sultanate era, education & literature in Mughal era.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize Vijaya Nagar Kingdom – Raja Krishnadeva Raya,

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize Chhatrapati Shivaji kingdom, Battle of Panipat.



## **Course 28: World History from 1890 to 1964 A.D.**

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize the , William II – foreign policy, division of Africa.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize modernization of Japan, Japan-Russia war, Chinese revolution.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize Young Turk movement, Balkan war, World War – I.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize Russian revolution-1917, Warsaw Treaty.

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize Italy's Fascism – Mussolini, Germany's Nazism – Hitler, , World War– II United Nations Organization (UNO) – establishment, composition, achievements.

## **Course 29: History of India from 1761 to 1947 A.D.**

CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize expansion of British rule – war & diplomacy – battle of Karnataka, Plassey, Buxar, alliance treaties.

CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize reforms in British rule, Capitalism – fall of industries & trade, fall of Agriculture and farmer's revolution, land revenue system.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize Indian renaissance – Brahma samaj, Aryasamaj, Ram Krishna mission, Theosophical society, Aligarh movement.

CO4. The students after the completion of this course will be able to contemplate and comprehend and recognize progress of western education and Press,

CO5. The students after the completion of this course will be able to contemplate and comprehend and recognize social classification of farmers, labors, middle class and women,

## **Course 30: History of Indian National Movement from 1857AD to 1947AD**

CO1 The students after the completion of this course will be able to contemplate and comprehend and recognize rise and Revolution of 1857

CO2 The students after the completion of this course will be able to contemplate and

comprehend and recognize pertaining to Indian National Congress and its deferent phases.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize socio-religious movement influenced the national consciousness.

CO4. They will be able to describe the significance of Gandhian freedom movement, Communalism – rise & progress, Subhash Chandra Bose & Azad Hind Fauj, India's Constitutional development

CO5. They will be able to identify other important movements and their role in National Movement. the rise and consequences of communalism and the process of transfer of power.

### **Course 31: Introduction to Sociology**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize the nature and scope of sociology.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize the basic concepts of society, community, institution, association etc.

**CO3.** The students after the completion of this course will be able to contemplate and comprehend and recognize different social groups.

**CO4.** The students after the completion of this course will be able to contemplate and comprehend and recognize various social processes.

### **Course 32: Contemporary Indian Society**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize the classical view about Indian Society and Varna Vyavastha.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize the structure and composition of Indian society.

### **Course 33:Society in India**

**CO1.** The students after the completion of this course will be able to contemplate and comprehend and recognize various social problems like Casteism, Regionalism, and Communalism etc.

**CO2.** The students after the completion of this course will be able to contemplate and comprehend and recognize various social problems like Dowry, Domestic Violence, Divorce etc.

**CO3.** The students after the completion of this course will be able to contemplate and comprehend and recognize basic Institutions of society.

### **Course 34: Crime and Society**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize social structure and anomalies.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize meanings, causes, consequences and remedies of Terrorism.

### **Course 35: Sociology of Tribal Society**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize classification of tribal people.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize socio cultural profile of tribe.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize various tribal problems.

**C04.** The students after the completion of this course will be able to contemplate and comprehend and recognize various tribal movements.

### **Course 36: Social Research Methods**

**C01.** The students after the completion of this course will be able to contemplate and comprehend and recognize & apply social survey and research.

**C02.** The students after the completion of this course will be able to contemplate and comprehend and recognize & apply research design.

**C03.** The students after the completion of this course will be able to contemplate and comprehend and recognize & apply techniques of data collection and statistics.

### **Course: Environmental Studies and Human Rights**

**C01.** The students after the completion of this course will be able to describe, recognize and practice multi disciplinary nature of environmental studies, natural resources: renewable and non-renewable resources - forest resources, deforestation, timber extraction, mining, dams and their effects on forests and tribal people and relevant forest act, water resources, surface and ground water, floods drought, conflicts over water, dams benefits and problems and relevant act, mineral resources, environmental effects of extracting and using mineral resources, food resources, world food problems, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, energy resources, renewable and non-renewable energy sources, use of alternate energy sources, land resources, land degradation, man induced landslides, soil erosion and desertification.

**C02.** The students after the completion of this course will be able to describe, recognize and practice ecosystem - producers, consumers and decomposers, energy flow in ecosystem, ecological succession, food chains, food webs and ecological pyramids,

structure and function of forest, grass, desert and aquatic ecosystem.

**CO3.** The students after the completion of this course will be able to describe, recognize and practice biodiversity and its conservation, genetic, species and ecosystem diversity, bio-geographical classification of India, value of biodiversity: consumptive use, productive use, social ethics, aesthetic and option values, biodiversity at global, national and local levels, India as mega-diversity nation, hot spots of biodiversity, threats to biodiversity, habitat loss, poaching of wildlife, man-wild life conflict, endangered and endemic species of India, conservation of biodiversity: in situ and ex-situ conservation of biodiversity..

**CO4.** The students after the completion of this course will be able to describe, recognize and practice pollution: causes, effect and control measures for – air, water, soil, marine, noise, nuclear pollution and human population, solid waste management, urban and industrial wastes, disaster management: floods, earthquake, cyclone and landslides, environmental management - from unsustainable to sustainable development, water conservation, rain water harvesting, water shed management, resettlement and rehabilitation of people, environmental ethics, climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, wasteland reclamation, environment protection act, environmental legislation, information technology in environment and human health.

**CO5.** The students after the completion of this course will be able to describe, recognize and practice concepts of human rights, classification of human rights, protection of human rights under the UNO charter, protection of human rights under the universal declaration of human rights, 1948 convention on the elimination of all forms of discrimination against women, convention on the rights of the child, 1989.

**CO7.** The students after the completion of this course will be able to describe, recognize and practice human rights norms in India, human rights under the constitution of India, fundamental rights under the constitution of India, directive principles of state policy under the constitution of India, enforcement of human rights in India, protection of human rights under the human rights act, 1993- national human rights commission, state human rights commission and human rights court in India, fundamental duties under the constitution of India.

---

## **BA -HOME SCIENCE**

### **B.A Home Science – 3 years Undergraduate programme**

#### **Programme Outcomes (PO)**

PO1. Student will be able to understand various parameters required for growth of child.

PO2. Student will be able to understand pregnancy related physiology of parent and child.

PO3. Student of home science will be able to understand pregnancy and child care.

P04. Student of home science will be able to understand adolescence psychology.

P05. Student will be able to understand various types of food and nutrition.

P06. Student will be able to understand various type of food related disease.

P07. Student will be able to understand cloths and washing.

P08. Student will be able to manage households with efficiency.

## **Course Outcomes (CO)**

### **Course I - Human Development**

CO1. Student will be able to understand various parameters required for growth of child. CO 2. Student will be able to understand pregnancy related physiology of parent and child.

CO 3. Student will be able to explore various stages of development from infancy, child and adolescence. CO 4. Student will be able to understand child parameters related to parent factors.

CO 5. The student of home science will be able to develop framework for understanding various needs of Infants.

CO 6. Student of Home science will be able to cultivate understanding of Adolescence psychology. He will be able to interpret development process of Adolescence to fully adult.

### **Course 2. Food and Nutrition Science**

CO1. This course will enable the student to understand the functions of food and the role of various nutrients, their requirements and the effects of deficiency and excess. Learn about the structure, composition, nutritional contribution and selection of different foodstuffs; Be familiar with Carbohydrate, fat, minerals, water etc. functions.

CO2. Student will be able to classify various type of food i.e. Milk, egg, Meat, Sugar, spices. He will be able to understand changes during process of cooking. He will be able to interpret different types of spices.

CO3. The students after completing this course will be able to plan improvements in cooking & preservation methods and nutritional qualities of various foods & foodstuffs.

CO4. Student of home science will be able to understand food management of kids, adults and old age.

CO5. Student will be able to understand different disease Diabetes weight gain, ulcer, Blood pressure.

### **Course 4: Introduction to Textile & Clothing**

CO1. The students after completing this course will be able to make fabric choices, construct clothing and predict textile performances.

CO2. The students after completing this course will be able to improve textile finishing, textile designing, textile printing, textile coloring & dyeing and designing of various embroideries.

CO3. The students will become acquainted with proper notion regarding choice of fabrics. CO4. The students will develop skills in dyes and printing of clothes.

C05. The students will become acquainted with different methodology of washing of clothes.

C06. The students will become acquainted with knowledge on different textiles finishes.

### **Course-Family Resources Management**

C01. Student will be able to manage home with efficiency. He will be able in decision making process.

C02. Student will be able to manage home decoration with efficiency. He will be able to understand elements

### **Course : Anatomy, physiology and Hygiene.**

C01. Student will be able to understand type of tissues and skeletal arrangement.

C02. Student will be able to understand circulatory system and digestive and nervous system. C03. Student of home science will be able to understand social hygiene.

C03. Student of home science will be able to understand first aid and home nursing.

### **Course Extension Education**

C01. The students after completing this course will be able to recognize the Concept of Education.

C02. The students after completing this course will be able to understand the Meaning of Extension Education, Origin of Extension Education and Extension Education Process.

C03. The students after completing this course will be able to recognize the Environment for learning.

C04. The students after completing this course will be able to recognize the role of educator, role of the people participants and Communication Process.

### **Programme Specific Outcomes (PSO)**

**PSO1.** The students of undergraduate programme in Home Science will be able to cultivate a scientific temper towards Fundamentals of Food and Nutrition. The students will be able to develop their scientific & technical acumen for food science & nutrition; food chemistry & food preservation.

**PSO2.** The students of undergraduate programme in Home Science will be able to cultivate a scientific temper towards Resource Management.

**PSO3.** The students will be able to develop their scientific & technical acumen for Human Development PSO4. The students will be able to grow a scientific & technical acumen for Textiles & Clothing, textile & laundry science; apparel & cloth designing, tailoring, embroidery & printing, art & design.

**PSO4.** The students will be able to develop their scientific & technical acumen for Food Preservation. The students will be able to develop their scientific & technical acumen for food science & nutrition; food chemistry & food preservation.

**PSO5.** The students of undergraduate programme in Home Science will be able to cultivate a scientific temper towards Extension Education. The students will be able to grow a logical, scientific & meticulous methodology for extension education and nursery school pedagogy.



## DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



### M.A. History

#### Program Objectives:

- To acquaint students with the past and present of India .
- Impart a critical understanding of Indian society, economy, polity, and culture through a historical perspective
- To prepare students for a range of careers
- To stimulate intellectual curiosity and research attitude in the students
- To introduce the various Indian and foreign traditions of history writing

#### Program Outcomes:

The following are the learning outcomes that we would like to see each History student Postgraduate with.

- PO.1 Capacity to explain how and why important events happen
- PO.2 Understanding of the historical method of study
- PO.3 A clear understanding of evidence collected from historical sources
- PO.4 Critical understanding of developments in historiography
- PO.5 Knowledge of the history of the India and 20th Century Modern World
- PO.6 Informed familiarity with multiplecultures and diversity
- PO.7 Awareness of current historical debates
- PO.8 Understand the skills that historians use in research

### COURSE OUTCOMES

#### CLASS M.A. HISTORY First Semester

##### PAPER - I

#### COURSE NAME: Methodology of History(Compulsory)

#### Course Outcomes:

- CO1. The students after the completion of this course will be able to contemplate and comprehend and recognize Meaning and definition of history and nature of history .
- CO2. The students after the completion of this course will be able to contemplate and comprehend and recognize Relationship of history with all other social science

➤CO3. After the completion of this course the student will be able to understand the causation in history

➤ CO4. After the completion of this course the student will be able to understand the various theories of History

## **PAPER - I I**

### **COURSE NAME: Modern world (Compulsory)**

#### **Course Outcomes:**

➤ CO1. After completion of this course, students will be able to understand the development of capitalism and liberalism in England

➤ CO2. After the completion of this course, the student will be able to understand the internal and foreign policy of Bismarck and Kaiser William II.

➤ CO3. After completion of this course, the student will be able to understand the causes and consequences of Balkan and World War I.

➤ CO4. After the completion of this course, the student will be able to understand the causes of the Russian Revolution of 1917 and the achievements and failures of the League of Nations.

## **PAPER - I I I**

### **COURSE NAME: Ancient and Medieval Chhattisgarh (Compulsory)**

#### **Course Outcomes:**

CO1. After the completion of this course, students will be able to understand the geographical introduction of Chhattisgarh and its history from Mauryan dynasty to the east.

CO2. After completion of this course, students will be able to understand the regional dynasties – Nalvansh, Sharabhपुरi dynasty, Pandu dynasty, Chhindaknag dynasty, Phaninag dynasty.

CO3. After completion of this course, students will be able to understand the arrival of Kalchuris in Chhattisgarh and the economic system of Kalchuris.

CO4. After completion of this course the student will be able to understand the Maratha rule and their administration in Chhattisgarh.

## **PAPER – IV**

### **COURSE NAME: Women in Indian History in Ancient &Medieval Period (Optional-B)**

#### **Course Outcomes:**



CO1. After completion of this course, the student will be able to understand the different philosophies of Women's Studies and the sources of Women's Studies.

CO2. After the completion of this course, students will be able to understand the status of women till Gupta.

CO3. After completion of this course, the student will be able to understand the education and legal status of women in ancient and medieval India.

CO4. After completion of this course, students will be able to understand the position of women in South India and Maratha politics.

## **COURSE OUTCOMES**

### **CLASS M.A. HISTORY Second Semester**

#### **PAPER - V**

**COURSE NAME: Historiography (Compulsory)**

#### **Course Outcomes:**

CO1. After completion of this course, the student will be able to understand the tradition of history writing in Greek and Roman and ancient India.

CO2. After completion of this course, students will be able to understand Medieval Indian and Imperialist, Nationalist, Marxist historiography.

CO3. After completion of this course, students will be able to understand various topics of Indian history, poetry and regional historiography.

CO4. After completion of this course, students will be able to understand the development of farmers, science and technology in Indian history.

#### **PAPER - VI**

**COURSE NAME: Contemporary world (Compulsory )**

### **Course Outcomes:**

CO1. After completion of this course, the student will be able to understand the rise of dictatorial regimes in the world and the Second World War - Causes and Consequences.

CO2. After completion of this course, you will be able to understand the Chinese Revolution of 1911 and the Civil War in China and the establishment of the Nationalist Government, the rise of the Communist Government in China.

CO3. After the completion of this course, the student will be able to understand the Cold War—international treaties and tensions, the cause of the deflection of communist Russia, and the strange.

CO4. After the completion of this course, the student will be able to understand the Non-Aligned Movement and International Problem.

### **PAPER - VII**

**COURSE NAME:** Modern Chhattisgarh (Compulsory)

### **Course Outcomes:**

CO 1. After completion of this course the student will be able to understand the contribution of Virnarayan Singh, Hanuman Singh in the establishment of British rule, and Chhattisgarh Revolt - Revolution of 1857.

CO2. After completion of this course, students will be able to understand the National Movement and Jungle Satyagraha in Chhattisgarh till 1920.

CO3. After completion of this course, students will be able to understand Quit India Movement, Peasant Movement, Labor Movement in Chhattisgarh.

CO4. After completion of this course the student will be able to understand Shaivism, Vaishnavism, Shakta, Jainism and Buddhism Kabir and Satnam Sampradaya in the state of Chhattisgarh.

### **PAPER - VIII**

**COURSE NAME:** Women in Modern India (Optional-B)

### **Course Outcomes:**

CO 1. After completion of this course, the student will be able to understand women's education in the colonial period, and women's organization of the 20th century.

CO2. After the completion of this course, the student will be able to understand the Indian independence movement, and women after independence..

CO3. After the completion of this course, the student will be able to understand the youth suffrage and the status of women in the Indian Constitution.

CO4. After the completion of this course, the student will be able to understand the contribution of women in the field of art and literature and women in human rights.

### **COURSE OUTCOMES**

**CLASS M.A. HISTORY Third Semester**

**PAPER - I**

**COURSE NAME: Modern India 1757 A.D. to 1857 A.D. (Political, Administrative) (Compulsory)**

### **Course Outcomes:**

CO 1. After completion of this course, the student will be able to understand the context of modern Indian history, and the ideologies of historiography.

CO2. After completion of this course, the student will be able to understand the advent of Europeans in India, and the expansion and programs of the British Empire.

CO3. The students after the completion of this course will be able to contemplate and comprehend and recognize Anglo Mysore Relations Anglo Maratha, Anglo-Afghan, Anglo-Sikh and Anglo Awadh Relations

CO 4. After the completion of this course the student will be able to understand and identify the Colonial Structure and Administrative Form of India, Constitutional Development 1773-1854

**PAPER - II**

**COURSE NAME: Modern India 1757 A.D. to 1857 A.D. (Economic, Social, Cultural) (Compulsory)**

### **Course Outcomes:**

CO 1. After completion of this course, the student will be able to understand the economic system of pre-colonial India, rise of European commercialism, commercial policy of the British and commercialization of agriculture.

CO2. After the completion of this course, the student will understand the rural industry, agriculture and land revenue system, adaptation.

CO3. After completion of this course, students will be able to understand Urban Industry and Deindustrialization 1757-1857.

**COURSE NAME: History of National Movement (1857 to 1922 A.D.)(Compulsory)**

**Course Outcomes:**

CO 1. After the completion of this course, understand Chhaya, the Revolt of 1857 and the rise of nationalism in India and the establishment of the Indian National Congress.

CO2. After completion of this course, the student will be able to understand the Partition of Bengal and the Swadeshi Movement, and the rise of communalism.

CO3. After the completion of this course, the student will understand the contribution of Gopalkrishna Gokhale, Bal Gangadhar Tilak to Indian politics and Gandhiji's entry into Indian politics and the early movement under his leadership.

CO 4. After the completion of this course the student will be able to understand the act of 1919 and the revolutionary movement and non-cooperation movement, non-cooperation.

**PAPER - IV**

**COURSE NAME: Cultural History of India (Beginning to 1526 A.D.)**

**Course Outcomes:**

CO 1. After completion of this course, the student will be able to understand women's education in the colonial period and 20th century women's organization.

CO2. After completion of this course, students will be able to understand Vedic period culture and Mahajanapada society and culture.

CO3. After the completion of this course, the student will be able to understand Gupta and Rajput society and religion, art science and literature society, art.

CO4. After the completion of this course the student will be able to understand Sultanate Society, Speculation of Sultanate Culture, Bhakti Movement Sufi Movement.

**CLASS M.A. HISTORY Forth Semester**

**PAPER - V**

**COURSE NAME: Modern India 1858 A.D. to 1964 A.D. (Political, Administrative)**

**Course Outcomes:**

CO1. After the completion of this course, the students understand the Constitutional Reforms (1858-1947) and the Constitution of the Republic of India - Jumpers User.

CO2. After completion of this course, students will be able to understand local self government, civil service, communication system and police administration..

CO3. After the completion of this course, the students can renew the understanding with the neighboring states- Afghanistan and Faras, Nepal and Burma.

CO4. After the completion of this course, the student will be able to understand the rise of Indian nationalism till 1919 and the labor, revolutionary movement, Gandhian movement.

## **PAPER - VI**

**COURSE NAME:** Modern India 1858 to 1964 A.D. Economic, Social, Cultural)

### **Course Outcomes:**

CO1. After the completion of this course you will be able to understand rural industry, condition of agriculture, famine policy, and development and movement of trade unions, population, railways and Indians.

CO2. After completion of this course, students will be able to understand the planning of land reforms during British period and after independence till 1964.

CO3. After completion of this course, students will be able to understand various religious and social reform movements.

CO4. After the completion of this course, students will be able to understand the efforts made for the upliftment of women during the British rule, and the development of modern education from 1858 to 1947

## **PAPER - VII**

**COURSE NAME:** Modern India 1858 to 1964 A.D. Economic, Social, Cultural)

### **Course Outcomes:**

CO1. After completion of this course, students will be able to understand the Swarajya Dal, and, Civil Disobedience Movement.

CO2. After completion of this course, the student should be able to understand the provincial autonomy and political deadlock 1940-45 and tribal movement.

CO3. After completion of this course, students will be able to understand Cripps Mission and Quit India Movement.

CO4. After completion of this course, students will be able to understand the distribution and system in India.

### **PAPER - V III**

**COURSE NAME:** Cultural History of India (1526 A.D. to 1950 A.D.)

#### **Course Outcomes:**

CO1. After completion of this course, students will be able to understand Mughal society, architecture, painting and South Indian cultural.

CO2. After the completion of this course, one can understand the art of South India and the economic impact of the arrival of Europeans.

CO3. After completion of this course the student will be able to understand Raja Ram Mohan Roy and Brahmo Samaj.

CO4. After completion of this course student Muslim Social Reform Movement  
And the British would be able to understand the condition of women in India.



# DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



## **M.A. SOCIOLOGY – 4 Semesters Postgraduate programme**

### **Programme Outcomes (PO)**

- PO1.** Students would be able to think critically on societal issues and its national & global implications.
- PO2.** Students would be able to shoulder social and ethical responsibilities in its true form and hence develop into a better citizen.
- PO3.** Students would be able to perceive social issues both objectively and subjectively.
- PO4.** Students would be able to develop better social interaction skills for greater exchange of thoughts and ideas.
- PO5.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.
- PO6.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.
- PO7.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.
- PO8.** The students will be able to demonstrate compassionate social concern and act with a cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.
- PO9.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.
- PO10.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.
- PO11.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

- PSO1.** The students after the completion of this programme will be able to contemplate

and comprehend Classical Sociological Tradition. Students would be able to understand sociological phenomena of individuals, socio-ethnic structures, socio-cultural institutions and socio-economic inequality.

**PSO2.**The students after the completion of this programme will be able to contemplate and comprehend Philosophical and Conceptual Foundation of Social Research. Students would be able to effectively communicate and draft sociological concepts and theories associated with real life situations.

**PSO3.**The students after the completion of this programme will be able to contemplate and comprehend Social Change in India. Students would be able to perform analytical thinking on the basis of survey, census & research of qualitative and quantitative data & information.

**PSO4.**The students after the completion of this programme will be able to contemplate and comprehend Rural Sociology. Students would be able to become a thorough professional with social intellect so as to have career opportunities galore social welfare, rural development, public policy, governance, business, social foundations, NGO and academia.

**PSO5.**The students after the completion of this programme will be able to contemplate and comprehend Classical Sociological Thinkers.

**PSO6.**The students after the completion of this programme will be able to contemplate and comprehend and apply Quantitative Research Techniques in Sociology.

**PSO7.**The students after the completion of this programme will be able to contemplate and comprehend Sociology of Development.

**PSO8.**The students after the completion of this programme will be able to contemplate and comprehend Indian Rural Society.

**PSO9.**The students after the completion of this programme will be able to contemplate and comprehend Classical Sociological Theories.

**PSO10.**The students after the completion of this programme will be able to contemplate and comprehend Social Movements in India.

**PSO11.**The students after the completion of this programme will be able to contemplate and comprehend Perspectives of Study to Indian Society.

**PSO12.**The students after the completion of this programme will be able to contemplate and comprehend Industry and Society in India.

**PSO13.**The students after the completion of this programme will be able to contemplate



and comprehend Criminology.

**PSO14.**The students after the completion of this programme will be able to contemplate and comprehend Modern Sociological Theories.

**PSO15.**The students after the completion of this programme will be able to contemplate and comprehend Comparative Sociology.

**PSO16.**The students after the completion of this programme will be able to contemplate and comprehend Contemporary issues in Industry.

### **Course Outcomes (CO)**

#### **Course 1: Classical Sociological Tradition**

**CO1.**Students will be able to make sense of modernity by identifying the emergence of sociology as a discipline.

**CO2.**Students will be able to understand critically and comparatively the methodological preferences of the founders of sociology.

#### **Course 2: Philosophical and Conceptual Foundation of**

**Social Research CO1.**Students will be able to recognize various issues in social research.

**CO2.** Students will be able to undertake research by selectively choosing and formulating a social research problem.

#### **Course 3: Social Change in India**

**CO1.**Students will be able to perceive disciplinary & inter-disciplinary ideas about the sociology and social change in India.

**CO2.** Students will be able to recognize the various factors of sociology and social change in India.

#### **Course 4: Rural Sociology**

**CO1.** Students will be able to assimilate the theoretical and empirical knowledge of the past and present rural scenario and approach in rural sociology.

**CO2.** Students will be able to identify with the various changes and development in rural sociology.

#### **Course 5: Classical Sociological Thinkers**

**CO1.** Students will be able to explain the major themes of Marxian and Weberian perspectives on the social world.

**CO2.** Students will be able to compare and differentiate between Marxian and Weberian

perspectives on the social world.

### **Course 6: Quantitative Research Techniques in Sociology**

**CO1.** Students will be able to assess, interlink, correlate and use the measures of central tendency and measures of variation involved in social research.

### **Course 7: Sociology of Development**

**CO1.** Students will be able to distinguish development theory from development as project and relate project development to environmental degradation and social use/abuse.

### **Course 8: Indian Rural Society**

**CO1.** Students will be able to absorb the theoretical and empirical knowledge of the past and present rural scenario and intricacies of social fabric in India.

### **Course 9: Classical Sociological Theories**

**CO1.** Students will be able to recognize the role of a sociological theory in the application of conceptual frameworks in a social research progress.

**CO2.** Students will be able to comprehend various sociological theories like structuralism and exchange theory.

### **Course 10: Social Movements in India**

**CO1.** Students will be able to understand the nature and types of social movements in India.

**CO2.** Students will be able to comprehend the theoretical perspectives of social movements in India.

### **Course 11: Perspectives of Study to Indian Society**

**CO1.** Students will be able to explain the major methods and concepts used in the systematic study of Indian society, its social classes, its social fabric and its sociological issues.

### **Course 12: Industry and Society in India**

**CO1.** Students will be able to identify the trends of Industrial disputes in Indian society and their impacts on Indian social classes & sociology.

### **Course 13: Criminology**

**CO1.** Students will be able to familiarize with mainstream criminological theories.

**CO2.** Students will be able to apply theories of crime and criminal justice to explain actual and hypothetical scenarios, behaviors and trends.

### **Course 14: Modern Sociological Theories**

**CO1.** Students will be able to debate on modern sociological theories.

**CO2.** Students will be able to identify the origin and development of modern sociological

theories.

### **Course 15: Comparative Sociology**

**C01.** Students will be able to compare the historical and social context of emergence of sociology.

**C02.** Students will be able to identify various theoretical concerns in comparative sociology.

### **Course 16: Contemporary issues in Industry**

**C01.** Students will be able to ascertain the history, objectives and functions of trade unionism in India.

**C02.** Students will be able to contemplate on Industrialization in the third world countries.



## DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



---

### **M.A. English Literature – 4 Semesters Postgraduate programme**

#### **Programme Outcomes (PO)**

- PO1.** Students would be able to think critically on contemporary literary issues of English literature and its national & global implications.
- PO2.** Students would be able to signify the influence of English literature on contemporary societal causes and hence develop into a better citizen.
- PO3.** Students would be able to perceive contemporary literary issues of English literature both objectively and subjectively.
- PO4.** Students would be able to develop better social interaction skills for greater exchange of thoughts and ideas.
- PO5.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.
- PO6.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.
- PO7.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.
- PO8.** The students will be able to demonstrate compassionate social concern and act with an cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.
- PO9.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.
- PO10.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.
- PO11.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued

self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

**PSO1.**The students after the completion of this programme will be able to contemplate and comprehend Poetry in English literature.

**PSO2.**The students after the completion of this programme will be able to contemplate and comprehend Drama in English literature.

**PSO3.**The students after the completion of this programme will be able to contemplate and comprehend Prose in English literature.

**PSO4.**The students after the completion of this programme will be able to contemplate and comprehend Fiction in English literature.

**PSO5.**The students after the completion of this programme will be able to contemplate and comprehend History of English Literature.

**PSO6.**The students after the completion of this programme will be able to contemplate and comprehend Critical Theory in English literature.

**PSO7.**The students after the completion of this programme will be able to contemplate and comprehend Indian Writing in English literature.

**PSO8.**The students after the completion of this programme will be able to contemplate and comprehend the influence of American literature on English literature.

**PSO9.**The students after the completion of this programme will be able to contemplate and comprehend the influence of Colonial and Post-Colonial Studies on English literature.

**PSO10.**The students after the completion of this programme will be able to contemplate and comprehend the influence of Linguistics on English literature.

**Course Outcomes (CO)**

Course 1: Poetry

**CO1.**Students would be able to identify a variety of forms and genres of poetry from diverse cultures and historic periods, such as sonnets, ballads, dramatic monologues, epic and pastoral, free verse, Elegy etc.

**CO2.** Students will be able to recognize the rhythms metrics and other musical aspects of poetry.

### **Course 2: Drama**

**CO1.** Students would be able to identify and understand the insights, genres, conventions and experimentations associated with English Drama.

**CO2.** Students will be able to explore how writers use the resources language's creativity to explore the entire range of human experience through dramas as a literary form.

### **Course 3: Prose**

**CO1.** Students would be able to identify and understand a literary text in different contexts,

and be aware of socio-political and economic conditions of the society from different periods.

**CO2.** Students will be able to write precisely with brevity.

#### **Course 4: Fiction**

**CO1.** Students would be able to identify and understand various cultures and construction of gender, nation and race throughout the history.

**CO2.** Students will be able to learn human values and the behavioral patterns from great work of art.

**CO3.** Students will be able to develop the ability to understand human race.

#### **Course 5: History of English Literature**

**CO1.** Students would be able to identify and delineate major writers and their works in chronological order.

**CO2.** Students will be able to compare English literature of one period with that of another.

**CO3.** Students will be able to classify all major literary works.

#### **Course 6: Critical Theory**

**CO1.** Students would be able to debate the nature of literary criticism based on classical Greek paradigms and trace the historical development of criticism.

**CO2.** Students will be able to develop an aptitude for critical analysis of literary works.

#### **Course 7: Indian Writing in English**

**CO1.** Students would be able to become aware of social, political and cultural issues reflected in Indian writing in English.

**CO2.** Students will be able to develop awareness for Indian social reformations, freedom struggle, women education and empowerment in nineteenth century.

**CO3.** Students will be able to discuss major class / Caste issues in the context of Indian Literature.

#### **Course 8: American Literature**

**CO1.** Students would be able to inculcate a rhetorical approach to the literary study of American texts and also the conceptions, generalization, myths and beliefs about American cultural history.

**CO2.** Students will be able to develop awareness of the social, historical, literary and cultural elements of the changes in American literature.

**CO3.** Students will be able to analyze literary works of eminent American writers.

#### **Course 9: Colonial and Post-Colonial Studies**

**C01.** Students would be able to explore and understand ways in which literary theory applies to their own lives and cultures in Post-Colonial literature.

**C02.** Students will be able to develop understanding and assessment of various mainstream and subaltern cultures and appreciate them.

### **Course 10: Linguistics**

**C01.** Students would be able to identify the symbols of all the 44 English sounds, and transcription of the sounds.

**C02.** Students will be able to improve the fluency in spoken English and neutralize mother tongue influence.

---

## **M.A. Political Science – 4 Semesters Postgraduate programme**

### **Programme Outcomes (PO)**

**PO1.** Students would be able to think critically on political issues and its national & global implications.

**PO2.** Students would be able to shoulder socio-political responsibilities in its true form and hence develop into a better citizen.

**PO3.** Students would be able to perceive political issues both objectively and subjectively.

**PO4.** Students would be able to develop better socio-political awareness and interaction skills for greater exchange of political thoughts and socio-political ideas.

**PO5.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**PO6.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

**PO7.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**PO8.** The students will be able to demonstrate compassionate social concern and act with a cognizant awareness of issues to contribute in civic life by volunteering impartially towards national development and thereby deliver effective citizenship.

**PO9.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**PO10.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**PO11.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

**Programme Specific Outcomes (PSO)**

**PSO1.** The students after the completion of this programme will be able to proactively contemplate and comprehend Indian Political Thought.

**PSO2.** The students after the completion of this programme will be able to proactively contemplate and comprehend Indian Government and Politics.

**PSO3.** The students after the completion of this programme will be able to proactively contemplate and comprehend Comparative Politics.

**PSO4.** The students after the completion of this programme will be able to proactively contemplate and comprehend International Organization.

**PSO5.** The students after the completion of this programme will be able to critically contemplate and comprehend Western Political Thought.

**PSO6.** The students after the completion of this programme will be able to proactively contemplate and comprehend and actively participate in State Politics in India.

**PSO7.** The students after the completion of this programme will be able to critically contemplate and comprehend Comparative Politics of Developing Countries.

**PSO8.** The students after the completion of this programme will be able to critically contemplate and comprehend Indian Foreign Policy.

**PSO9.** The students after the completion of this programme will be able to deeply contemplate and comprehend Principles of International Politics.

**PSO10.** The students after the completion of this programme will be able to proactively contemplate and comprehend and critically gauge Public Administration – I.

**PSO11.** The students after the completion of this programme will be able to proactively contemplate and comprehend and apply the principles of Research Methodology - I in political issues.

**PSO12.** The students after the completion of this programme will be able to proactively and critically contemplate and comprehend and perform a participatory role in Government and Politics of Chhattisgarh.

**PSO13.** The students after the completion of this programme will be able to critically contemplate and comprehend Contemporary of International Politics.

**PSO14.** The students after the completion of this programme will be able to proactively



contemplate and comprehend and critically gauge Public Administration – II.

**PSO15.**The students after the completion of this programme will be able to proactively contemplate and comprehend and apply the principles of Research Methodology - II in political issues.

**PSO16.**The students after the completion of this programme will be able to critically and proactively contemplate and comprehend Political Ideologies and Modern Political Thought and choose the best suitable one for individual's, society's, state's and nation's uprising.

### **Course Outcomes (CO)**

#### **Course 1: Indian Political Thought**

**CO1.**The students will be able to critically contemplate and comprehend on Indian Political thought and philosophical thinkers.

**CO2.**The students will be able to critically contemplate and comprehend about the new thinkers like Nehru, DeendayalUpadhyay, AbdulKalam etc.

#### **Course 2: Indian Government and Politics**

**CO1.**The students will be able to critically explain the politics, governance and authority of India.

**CO2.**The students will be able to critically assess the information about racism, regionalism, communalism, criminalization and corruption and be refrained from such politics and politicians.

#### **Course 3: Comparative Politics**

**CO1.**The students will be able to critically judge the useful information about the probable consequences of different political order.

**CO2.**The students will be able to critically assess the constitutions or party systems of different countries and voluntarily participate to bring positive changes in Indian political atmosphere.

#### **Course 4: International Organization**

**CO1.**The students will be able to critically decide upon the scope and subject matter of International relation.

**CO2.**The students will be able to critically assess the basic concepts like Globalization in contemporary world order.

#### **Course 5: Western Political Thought**

**CO1.**The students will be able to critically understand the dominant feature of ancient western political thought.

**CO2.**The students will be able to critically assess features of medieval political thought.

### **Course 6: State Politics in India**

**CO1.**The students will be able to critically understand the State Legislature and State Executives.

**CO2.**The students will be able to critically assess the demand for State Autonomy.

### **Course 7: Comparative Politics of Developing Countries**

**CO1.**The students will be able to critically understand the classification of Government.

**CO2.**The students will be able to critically assess the political development, political Elites, Political socialization, Political Modernization.

### **Course 8: Indian Foreign Policy**

**CO1.**The students will be able to critically ascertain the increasing India's influence in the international platform.

**CO2.**The students will be able to critically assess India's foreign policy and India's engagement with the rest of the world.

**CO3.**The students will be able to critically examine India's foreign relations with her neighbors.

### **Course 9: Principles of International Politics**

**CO1.**The students will be able to critically assess the evolution of International politics.

**CO2.**The students will be able to critically contemplate the theories of International politics.

**CO3.**The students will be able to critically examine the nature and developments in International politics.

### **Course 10: Public Administration – I**

**CO1.**The students will be able to critically ascertain the concept of administration in India.

**CO2.**The students will be able to critically compare traditional approach and new approaches. **CO3.**The students will be able to critically examine the structure and operation of public organizations.

### **Course 11: Research Methodology – I**

**CO1.**The students will be able to critically ascertain and apply various research methods used in social science by drawing upon a range of theoretical and empirical research in survey studies of political science.

**CO2.**The students will be able to critically examine the theoretical aspects comprising an

exploration of various theories, concepts and term that are part of the research methodology in survey studies of political science.

### **Course 12: Government and Politics of Chhattisgarh**

**CO1.**The students will be able to critically ascertain and comprehend the main determining factors and features of state politics in Chhattisgarh.

**CO2.**The students will be able to critically assess the various national movements in Chhattisgarh and major social reformist and political leaders.

### **Course 13: Contemporary of International Politics**

**CO1.**The students will be able to critically ascertain and comprehend the fundamental theories and themes of contemporary International politics.

**CO2.**The students will be able to critically think, analyze information, and express their ideas clearly in the practice of International politics.

### **Course 14: Public Administration – II**

**CO1.**The students will be able to critically ascertain the importance of public administration in India. **CO2.**The students will be able to critically examine the characteristics of public administration in India. **CO3.**The students will be able to critically assess the operations of public organizations in India.

### **Course 15: Research Methodology – II**

**CO1.**The students will be able to perform the critical review of published political science literature and research for advancement of new research and development in political science.

**CO2.**The students will be able to critically examine the research methodology used in survey studies of political science.

**CO3.**The students will be able to critically analyze the data used in survey studies of political science and comprehend the data based conclusive interpretations for political survey studies in India.

### **Course 16: Political Ideologies and Modern Political Thought**

**CO1.**The students will be able to perform the critical comprehension, review and assessment of various concepts like Individualism, Existentialism, Feminism, Liberalism, Socialism etc prevalent in national and international political scene.

**CO2.**The students will be able to critically contemplate, assess and review of political thinkers like Antonio Gramsci, Jean Paul Sartre and their political views and opinions.



# DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



## **M.A. Economics – 4 Semesters Postgraduate programme**

### **Programme Outcomes (PO)**

**PO1.** The M.A. Economics semester wise programme offered by the College accomplishes the students to cash in on the opportunities and overcome the challenges in the field of economics by providing systematic learning of Economics – Micro, Macro, Quantitative, Indian, Industrial, Research, Indian policy, Labor, Growth, International, Public, Environmental, Demography, Development & Planning,

Social sector and Viva-Voce. The students after the completion of this programme become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stock-exchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors, policy making etc.

**PO2.** The students after the completion of this programme will be enabled to overcome the challenges and cash in the opportunities in the field of economics.

**PO3.** The students after the completion of this programme will become well prepared to take up various professional assignments, engagements and jobs in medium to large scale business establishments, industries, commercial set-ups and other public/private commercial sectors like banking, stock- exchange, insurance, NBFCs as accountants, investment bankers, business analysts, finance officers, business / financial advisors, policy making etc.

**PO4.** The students will be able to think critically and take informed decisions after identifying the accuracy and validity of their assumptions and ideas from intellectual, organizational, and personal perspectives.

**PO5.** The students will be able to communicate effectively through speaking, reading, writing and listening clearly in one Indian language and thereby express themselves to the world by connecting with different ideas, books, people, media and technology.

**PO6.** The students will be able to interact socially and stimulate views, reconcile disagreements and help reach consensual conclusions.

**PO7.** The students will be able to demonstrate compassionate social concern and act with cognizant awareness of issues to contribute in civic life by volunteering impartially

towards national development and thereby deliver effective citizenship.

**P08.** The students will be able to ethically recognize different value systems, understand the moral dimensions of individual decisions and accept responsibility for them.

**P09.** The students will be able to recognize the issues of environmental perspectives and appreciate sustainable development for long term environmental sustainability.

**P010.** The students will be able to engage themselves in life-long self-determining and learning in the comprehensive background of socio-technological changes for continued self-directed and life-long learning.

### **Programme Specific Outcomes (PSO)**

**PSO1.** The students after the completion of this programme will become well versed with Micro Economics-I.

**PSO2.** The students after the completion of this programme will become well versed with Macro Economics-I.

**PSO3.** The students after the completion of this programme will be able to understand Quantitative Methods.

**PSO4.** The students after the completion of this programme will be able to understand Indian Economy.

**PSO5.** The students after the completion of this programme will be able to identify Industrial Economics.

**PSO6.** The students after the completion of this programme will be able to understand the Micro Economics-II.

**PSO7.** The students after the completion of this programme will be able to understand the essentials of Macro Economics-II.

**PSO8.** The students after the completion of this programme will be able to understand the essentials of Research Methodology and Computer Application.

**PSO9.** The students after the completion of this programme will be able to understand the essentials of Indian Economic Policy.

**PSO10.** The students after the completion of this programme will be able to understand the principles of Labor Economics.

**PSO11.** The students after the completion of this programme will be able to understand the essentials of Economics of Growth.

**PSO12.** The students after the completion of this programme will be able to understand the fundamentals of International Trade.

**PSO13.** The students after the completion of this programme will be able to understand the principles of Public Finance.

**PS014.** The students after the completion of this programme will be able to recognize the procedures of Environmental Economics.

**PS015.** The students after the completion of this programme will be able to understand the essentials, principles and procedures of Demography.

**PS016.** The students after the completion of this programme will be able to understand the principles of Economics of Development and Planning.

**PS017.** The students after the completion of this programme will be able to understand the procedures of International Economics.

**PS018.** The students after the completion of this programme will be able to understand the essentials and fundamentals of Public Economics.

**PS019.** The students after the completion of this programme will be able to understand the essentials and fundamentals of Economics of Social Sector.

**PS020.** The students after the completion of this programme will be able to do Viva-Voce in various fields of commerce studies.



# DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



## **M.Sc. Mathematics– 4 Semesters Postgraduate programme**

### **Programme Outcomes (PO), Programme Specific Outcomes (PSO), Course Outcomes (CO)**

Class	Paper Name	Outcome
M.Sc.- I & II Sem.	Advanced Abstract Algebra	<ol style="list-style-type: none"><li>1. Students will learn Group theory, Ideals, Ring theory, Modules, Vector space, Normal Group, Abelian group etc.</li><li>2. Students Skills to solve any theorem by using the properties of the given group, Ring, Ideal or field.</li><li>3. Students compute different theorems and learn how to find the Galois group of any given group.</li></ol>
	Real Analysis	Students will be able to know the sequence and series of real numbers, convergence and divergence of both sequence and series. Determine the Riemann integrability.
	Topology	Students Skill to:- <ol style="list-style-type: none"><li>1. Understand various basic topologies and topological spaces.</li><li>2. Understand the countability and uncountability of spaces and sets and their types.</li><li>3. Understand the concept of connectedness, compactness, completeness of spaces.</li><li>4. Understand the topological and hereditary property</li><li>5. Learns the separation axioms.</li></ol>

	Complex Analysis	<p>Students will learn to:-</p> <ol style="list-style-type: none"> <li>1. Analyze sequence and series of complex numbers and analytical function.</li> <li>2. Apply the concept of Cauchy-Riemann equations for analytic function.</li> <li>3. Compute complex contour integrals and apply the cauchy Integral formula in various versions.</li> </ol> <p>Understand the concept of Harmonic functions.</p>
	Advanced Discrete Mathematics	<ol style="list-style-type: none"> <li>1. Students will know about the finite state machine, their outputs corresponding to their next state of input.</li> <li>2. Students will learn the conjunctives and disjunctive Canonical form of two, three, four variables.</li> <li>3. Students learn to formulate the output of Mealy and Moore machine, parallel and series circuits.</li> </ol> <p>Students will have the knowledge of graphs, Trees, Spanning trees etc.</p>
M.Sc.- III & IV Sem.	Integration Theory and Functional Analysis	<p>Students Skill to:-</p> <ol style="list-style-type: none"> <li>1. Learn the concept of linear and bounded linear transformation.</li> <li>2. Understands the Function spaces and conjugate of Function Spaces.</li> <li>3. Understand the concept of Dual linear spaces.</li> <li>4. Learns to compute the real and complex functions.</li> </ol>
	PDE and Mechanics	<p>Students will have the knowledge and Skills to:-</p> <ol style="list-style-type: none"> <li>1. Form the partial differential equations and solve them.</li> <li>2. Learn the wave equations and heat equations and form their solutions.</li> <li>3. Solve the problems on first order and higher degree partial differential equations and its</li> <li>5. application.</li> </ol>



	Fuzzy Sets and their Applications	<ol style="list-style-type: none"> <li>1. Students learn the fundamentals of fuzzy set theory.</li> <li>2. Students Skill to compute operations with fuzzy sets, extension principle, fuzzy logic, fuzzy probability.</li> <li>3. Students acquire knowledge of important parts of fuzzy set theory which will enable them to create effective mathematical models of technical phenomena.</li> </ol>
	Operations Research	<ol style="list-style-type: none"> <li>1. Students will be able to model LPP and solve them.</li> <li>2. Students will understand the feasibility, infeasibility, basic, bounded, unbounded, optimal solutions of the problem.</li> <li>3. Students will understand the Game theory.</li> <li>4. Modify a primal problem and obtain its solution.</li> </ol>
	Programming In 'C'	<p>Students will learn to:-</p> <ol style="list-style-type: none"> <li>1. Code programs in 'C' of different types.</li> <li>2. Understand different type of preprocessors in 'C'.</li> </ol> <p>Struct basic structure of C-program and learns how to compile and run a C-program.</p>



# DR. KHOOBCHAND BAGHEL GOVT. PG COLLEGE

Bhilai-3, Dist:- Durg, Chhattisgarh

Reaccredited Grade "B" By NAAC

Registered Under Section 2(F) & 12(B) of UGC Act

Affiliated to Hemchand Yadav University, Durg (C.G.)



## PGDCA – 2 Semesters postgraduate diploma programme

### Programme Outcomes (PO), Programme Specific Outcomes (PSO), Course Outcomes (CO)

#### Course Outcomes of PGDCA

Semester	PAPER CODE	PAPER NAME	PAPER OUTCOMES
I	PGDCA 101	Introduction to Software Organization	<ul style="list-style-type: none"> <li>Describe basic organization of computer and the architecture of Pentium processor.</li> <li>Demonstrate control unit of operation.</li> <li>Categorize memory organization and explain the function of each element of a memory hierarchy.</li> <li>Understanding of network, types and topology.</li> <li>Understanding to internet, media and protocols.</li> </ul>
I	PGDCA 102	Programming in "C"	<ul style="list-style-type: none"> <li>Illustrate the flowchart and design an algorithm for a given problem and to develop C program.</li> <li>Develop conditional and iterative statements to write C programs.</li> <li>Design user define functions to solve real time problems.</li> <li>Using Pointers user write programs to access Arrays, Strings and Functions.</li> <li>Exercise user define data types including structures and unions to solve a problems.</li> </ul>
I	PGDCA 103	Office Automation and Tally	<ul style="list-style-type: none"> <li>To perform documentation using MS-Word.</li> <li>To perform arithmetic and logical operations using MS-Excel.</li> <li>To perform presentation skills using MS-Power Point.</li> <li>Design a database with lookup tables Using MS-Access.</li> <li>To perform accounting operation using Tally.</li> </ul>

I	PGDCA 104	PGDCA - 104:Practical based on PGDCA - 103	<ul style="list-style-type: none"> <li>● To perform documentation using MSWord.</li> <li>● To perform arithmetic and logical operations using MS-excel.</li> <li>● To perform presentation skills using MS-Power Point.</li> <li>● Design a database with lookup tables Using MS-Access.</li> <li>● To perform accounting operation using Tally.</li> </ul>
---	-----------	---	---

I	PGDCA 105	PGDCA - 105:Practical based on PGDCA -102	<ul style="list-style-type: none"> <li>● Illustrate the flowchart and design an algorithm for to the given problem.</li> <li>● Understand basic structure of the C programming, declaration and usage of variables and operators.</li> <li>● Exercise conditional and iterative statements to write C programs.</li> <li>● Write C programs using Pointer to access Arrays , Strings and Functions.</li> </ul>
Semester	PAPER CODE	PAPER NAME	PAPER OUTCOMES
II	PGDCA 106	GUI- Programming in Visual Basic	<ul style="list-style-type: none"> <li>● Use a modern IDE to visually and programmatically create program with GUI's.</li> <li>● Understand and use the event driven model.</li> <li>● Create an application that using exception handling.</li> <li>● Understand different connectivity methods.</li> <li>● Create crystal report.</li> </ul>
II	PGDCA 107	Database Management System	<ul style="list-style-type: none"> <li>● Explain the features of database management system and relational database.</li> <li>● Design conceptual models of database using ER Modeling and construct queries in relational algebra.</li> <li>● Create and populate a RDBMS for a real life application, with constraint and keys using SQL.</li> <li>● Retrieve any type of information from a database by formulating complex queries in SQL.</li> <li>● Analyze the existing design of a database schema and apply concepts of normalization to design an optimal database.</li> </ul>
II	PGDCA 108	Essential of E-commerce and HTML	<ul style="list-style-type: none"> <li>● Understanding concept of E-commerce and types.</li> <li>● Understanding various E-Business strategies.</li> <li>● Understand different type of online payment system.</li> <li>● To get familiar with basics of the Internet Programming.</li> <li>● To acquire knowledge and skills for creation of web site.</li> <li>● To gain ability to develop responsive web application.</li> </ul>

II	PGDCA 109	PGDCA-109: Practical Based on PGDCA- 106,107,108	<ul style="list-style-type: none"> <li>• Construct appropriate user interfaces for simple programs and design system with minimal complexity and maximal functionality.</li> <li>• Effectively use software development tools including libraries compilers, editors, linkers, debuggers.</li> <li>• Create and populate a RDBMS for a real life application, with constraint and keys using SQL.</li> <li>• Retrieve any type of information from a database by formulating complex queries in SQL.</li> <li>• Implement interactive web page(s) using HTML, CSS and JavaScript.</li> <li>• Develop responsive web application using HTML and CSS.</li> </ul>
II	PGDCA 110	PGDCA-110: Project	<ul style="list-style-type: none"> <li>• Identify the requirements of the real world problems.</li> <li>• Conduct a survey.</li> <li>• Design the problem solution as per the requirement analysis done.</li> <li>• Demonstrate and build the project successfully by coding and testing.</li> </ul>



प्राचार्य  
Principal

Dr. K.C.B Govt. P.G. College  
Rhilai-3 Dist-Durg (C.G)