Chemistry

Course outcome

The course content of chemistry has been designed in such a way that it strengthens the fundamental knowledge of all branches of chemistry. Besides, the given course provides deep insight of all the concepts and theories of chemistry in understanding the behavior of molecules. The course structure will help students to correlate more and more practical applications of chemistry in our day-to-day life for making it easier.

Paper name: Fundamentals of Chemistry I

- (i) The course enables the students to learn composition of atom, dual behavior of matter, concepts of quantum mechanics, rules for filling electrons in orbitals and how to write electronic configurations of atoms.
- (ii) The students can enhance their knowledge about general characters of Ionic bonding, Covalent bonding, Shapes of molecules on the basis of VSEPR theory and Hybridization. Applications of Molecular Orbital Theory in determining the bond order and magnetic behavior of atoms.
- (iii) The students can understand the role of different electron displacement effects in reaction mechanism, reactivity of organic molecules and aromatic behavior of Organic compounds.
- (iv) The stereochemistry chapter of course enables students to understand two-dimensional and three dimensional structures of molecules and their role in reaction mechanism. D & L, R & S and E &Z system of nomenclature.
- (v) The students can gain knowledge about kinetic theory of gases, Vander Waals gas equation, critical phenomenon, molecular velocities of gases, viscosity of liquids, surface tension of liquids, characters of solid state and Bragg equation.
- (vi)The students can boost their knowledge with optical, kinetic and electrical properties of colloidal solutions, Chemistry of protective colloids, Hardy-Schulze law and concept of gold number.

Paper name: Inorganic Chemistry-II

- (i)The course enables the students to learn about the characters of first, second and third transition series. Nomenclature of coordination compounds, Werner's theory, VBT and CFT.
- (ii)The course helps students to gain knowledge about properties and characters of Lanthanide and Actinide elements.
- (iii)The students can learn about electrochemical series, electrode potential and principle involved in the extraction of the elements.
- (iv)The students can have deep understanding of types of solvents and their general characteristics, Reactions in non-aqueous solvents with reference to liquid ammonia and liquid sulphur dioxide.

Paper name: Organic Chemistry-II

- (i) The course enriches student knowledge with applications of UV-Visible spectroscopy, types of electronic transitions, chromophore, auxochrome, bathochromic shift, hypsochromic shift, IR spectra of simple organic compounds.
- (ii) The course enables the students to understand nomenclature, preparation and important reactions of alcohols, Phenols, ethers, epoxides.
- (iii)The students can also be acquainted with preparation, properties and mechanism of important reactions of Aldehydes, Ketones, carboxylic Acids, Carboxylic acid derivatives and organic compounds of Nitrogen.

Paper name: Physical Chemistry-II

- (i) The course helps students to understand the laws of thermodynamics, state and path functions, Thermochemistry of reactions, Hess law of heat summation and Kirchhoff's equation.
- (ii) The students can enhance their knowledge about Chemical equilibrium, free energy, Le Chatelier's principle, reaction isotherm, reaction isochore and Clapeyron-clausius equation.
- (iii) The students can boost up their knowledge about ideal, non-ideal solutions, Henry's law, Azeotropes, critical solution temperature, Phase equilibria and Nernst distribution law.
- (iv) The course helps students to learn about specific conductivity, equivalent conductivity, molar conductivity, Transport number, Buffer solutions, solubility product, conductometric titrations and electromotive force.
- (vi) The students may learn the shifting of Equilibria in chemical reaction, relation between K_p , K_c and K_x , factors affecting degree of ionization.

Paper name: Inorganic Chemistry-III

- (i) The course enables students to understand metal-ligand bonding in Transition Metal Complexes, Thermodynamic and kinetic stability of metal complexes.
- (ii) The course gives deep knowledge of magnetic properties of transition metal complexes, Evaluation of electronic spectra of transition metal complexes.
- (iii)The course helps students to learn chemistry of organometallic compounds, metal carbonyls, silicon, hard and soft water.
- (iv)The students can understand the importance of essential and trace elements in our life. Chemistry of metalloporphyrins with special reference to Hemoglobin, myoglobin.

Paper name: Organic Chemistry-III

(i)The course helps students to learn characters of NMR spectroscopy, nuclear shielding and de-shielding, chemical shift, proton counting and interpretation of NMR spectra of simple organic compounds.

- (ii) The students can gain knowledge about preparation and properties of organometallic compounds, organosulphur compounds and heterocyclic compounds with special reference to pyroll, furan, thiophene, pyridine, quinoline and isoquinoline.
- (iii) The course enables the students to understand the structure of Carbohydrates, Amino acids, Proteins, Nucleic acids, Fats and oils.
- (iv) The students can be benefitted with the knowledge of synthetic polymers, their methods of preparation, Preparation of dyes, colour constitution and organic synthesis via Enolates with special reference to diethyl malonate and ethyl acetoacetate.

Paper name: Physical Chemistry-III

- (i) The course enables students to learn about Black- body radiation, Photoelectric effect, Compton effect, de-Broglie's hypothesis, Heisenberg's uncertainty principle schrodinger's wave equation and Molecular orbital theory.
- (ii) With reference to structural elucidation the students can enrich their knowledge with physical properties like optical activity, polarization, dipole moment, paramagnetism, diamagnetism and ferromagnetism.
- (iii) The course helps students to gain knowledge about microwave spectroscopy, vibrational spectroscopy, Raman spectroscopy and electron spectroscopy.
- (iv)The students can be acquainted with laws of photochemistry, Photosensitized reactions , quantum yield, fluorescence and phosphorescence phenomenon.
- (v)The students gained knowledge about ideal, non-ideal solutions, Colligative properties of solutions, abnormal molar mass, Von't Hoff factor and degree of dissociation and association of solutes.

Paper name: Inorganic Chemistry-(CHC101)

- (i) The course enables students to understand metal-ligand bonding in coordination compounds, CFT, Jahn-Teller distortion, Molecular orbital theory, Thermodynamic and kinetic stability of metal complexes, stepwise and overall formation constants
- (ii) The course gives deep knowledge of VSEPR theory, properties and structure of metal borides, carbides and nitrides.
- (iii)The course helps students to learn chemistry of reaction mechanism of transition metal complexes. Inert and labile complexes. Ligand substitution reaction in octahedral complexes. Electron transfer reaction. Substitution reactions in square-planer complexes.

Paper name: Organic Chemistry-(CHC102)

(i) The course enriches student's knowledge with resonance, hyperconjugation, Aromaticity, Crown ether complexes and inclusion compounds. Understanding the nature of bonding in organic molecule, delocalized chemical bonding conjugation, cross conjugation, resonance, hyperconjugation, aromaticity, antiaromaticity.

- (ii) The course enables the students to understand molecular symmetry, stereoisomerism, D & L, R & S and E &Z system of nomenclature. Stereochemistry of compounds containing N, S and P. Steroselectvity, stereospecificity, regioselectivity and Chemoselectivity.
- (iii)The students can also be acquainted with reaction mechanism, Hammond's postulate, potential energy diagrams, effect of structure on reactivity, Hammett equation and linear free energy relationship and taft equation.
- (iv) The course helps students to learn mechanism of SN^1 and SN^2 mechanism. Pinacol-Pinacolone rearrangement, Wagner-Meerwein rearrangement, Allylic rearrangement, Hofman reaction and application of NMR spectroscopy in detection of carbocations.

Paper name: Physical Chemistry-(CHC103)

- (i) The course helps students to understand quantum chemistry, dr-Broglie's equation, schrodinger equation, approximation methods of quantum mechanics, valence bond and molecular orbital approaches.
- (ii) The students can enhance their knowledge about thermodynamic laws, concept of fugacity, Activity and Debye-Huckel theory
- (iii) The students can boost up their knowledge about Arrhenius equation, collision theory of reaction rates, Activated complex theory, Kinetics of unimolecular reactions, kinetics of chain reactions and kinetics of photochemical reactions.
- (iv) The course helps students to learn about surface chemistry, concept of micellization and factors affecting micelles formation.

Paper name: Group theory and Analytical Methods-(CHC104)

- (i) The course enables the students to learn symmetry elements and symmetry operations, definition of group, sub group, matrix representation of groups, character table and orthagonality theorem.
- (ii) The course helps students to enhance their knowledge about Chromatographic and radio analytical methods.
- (iii) The students can understand the principle of microwave spectroscopy, selection rule for microwave, Stark effect, vibrational and Raman spectroscopy.
- (iv) The atomic and molecular spectroscopic unit of course enables students to understand Frank Condone principle, Electronic spectrum of diatomic molecules, Fluorescence, Phosphorescence and stimulated emission.

Paper name: Inorganic Chemistry-(CHC201)

- (i) The course enriches student's knowledge with electronic spectra and magnetic properties of transition metal complexes, Orgel and Tanabe-Sugano diagrams, Charge transfer spectra and anamolous magnetic moments.
- (ii) The course enables the students to understand metal-Π acid complexes and organometallic compounds. Preparation properties and uses of metal carbonyls.

(iii)The students can also be acquainted with metal clusters, polyoxometalates and silicates. Preparation and structure aspects of poly acids and polyanions.

(iv)The course helps students to learn chemistry of silicates with special reference Asbestos, Zeolotes and Ultramarines.

Paper name: Organic Chemistry-(CHC202)

- (i) The course helps students to understand the chemistry of free radical reactions like types of free radical reactions, allylic halogenations via NBS and mechanism of Sandmeyer, Hunsdiecker reaction.
- (ii) The students can enhance their knowledge about the Electrophilic substitution reactions of aliphatic organic compounds, aromatic organic compounds.
- (iii) The course helps students to learn about the chemistry of addition reaction and elimination reactions, pericyclic reactions.

Paper name: Physical Chemistry-(CHC203)

- (i) The students can have deep insight of statistical thermodynamics viz. Maxwell-Boltzmnn, Bose-Einstein and Fermi-Dirac Statistics.
- (ii) The course helps students to enhance their knowledge about non-equilibrium thermodynamics, entropy production and entropy flow, Onsager's reciprocity relations and irreversible thermodynamics for biological systems.
- (iii) The students can understand the basics of electrochemistry, Debye-Huckel-Onsagar treatment for ion-solvent interactions, Polarography and corrosion.
- (iv) The atomic and molecular spectroscopic unit of course enables students to understand kinetics of polymerization, molecular mass determination and calculation of average dimensions of various chain structures.

Paper name: Spectroscopy and Analytical methods-(CHC204)

- (i) The students can understand methods of thermal analysis like TGA, DTA and DSC, principle of XRD and its applications in determination of crystal structure.
- (ii) The course enhances student's knowledge about ESR and NMR spectroscopy.
- (iii) The students can boost up their knowledge about mass spectrometry.
- (iv) The course helps students to learn about electro-analytical methods viz. Potentiometry, Voltametry, conductometry and pH metry.

Paper name: Reagents in Organic Synthesis and Organometallics-(CHC304)

- (i) The course enables the students to understand the chemistry of oxidation and reduction reactions like oxidation of alkenes, aromatic rings, alcohols, diols, aldehydes, ketones.
- (ii)The students can also be acquainted with the chemistry of reduction reaction like reductions of alkenes, alkynes, aromatic rings and reductions of aldehyde, ketones, epoxides, reduction of nitro groups.
- (iii)The course helps students to learn chemistry of organometallics in synthesis.

Paper name: Spectroscopy-(CHC302)

- (i) The course enables the students to learn principle of Photo-Electron spectroscopy, Koopman's theorem, photoelectron spectra of simple molecules, Fluorescence and Phosphorescence.
- (ii) The students can enhance their knowledge about Nuclear Quadrupole Resonance Spectroscopy..
- (iii) The students can understand the concepts and techniques of Mossbauer Spectroscopy.
- (iv) The course helps students to learn ORD and CD techniques.

Paper name: Organic Photochemistry-(CHC305)

- (i) The students can understand basic concepts of Photochemistry, Franck-Condon Principle, Jablonsky diagram, Photochemical stages, fluorescence, Phosphorescence and Chemiluminiscence.
- (ii) The course enhances student's knowledge about Photochemistry of Organic compounds.
- (iii) The students can boost up their knowledge about Photochemistry of Carbonyl Compounds.
- (iv) The course helps students to learn about Photochemistry of aromatic compounds.

Paper name: Chemistry of Biological System I-(CHE303)

- (i) The course enables the students to learn important properties of enzymes, Fischer's lock and key and Koshland's induced fit hypothesis and Enzyme kinetics.
- (ii) The course helps students to enhance their knowledge about mechanism of enzyme action and kinds of reactions catalyzed by enzymes.
- (iii) The students can understand enzyme models and co-enzyme chemistry.
- (iv) The students can be acquainted with applications of enzymes in our life.

Paper name: Organic Synthesis-(CHC404)

- (i) The students can understand synthetic equivalent disconnection approach, chemoselectivity, reversal of polarity and cyclisation reactions.
- (ii) The course enhances student's knowledge about one group and two groups C-C disconnection.

- (iii) The students can boost up their knowledge about ring synthesis and protecting groups.
- (iv) The course helps students to learn about synthesis of some complex molecules viz. camphor, vitamin D, Longifoline, Cartisone and Reserpine.

Paper name: Organic Spectroscopy-(CHC405)

- (i) The course enables the students to learn electronic transitions in organic compounds, factors affecting absorption maxima, woodward Fieser rules for determining maxima and UV-VIS spectra of alkenes, carbonyl compounds, alcohols and phenols..
- (ii) The students can enhance their knowledge about IR spectroscopy.
- (iii) The students can understand the concepts and techniques of NMR spectroscopy.
- (iv) The course helps students to learn concepts and techniques of Mass Spectroscopy.

Paper name: Heterocyclic Compounds-(CHC406)

- (i) The students can have deep insight of Aromatic and Non-aromatic Heterocycles
- (ii) The course helps students to enhance their knowledge about small ring and benzo-fused five membered heterocycles.
- (iii) The students can understand the chemistry of six membered heterocycles with one, two or more hetero atoms.
- (iv) The course enables the students to learn the synthesis of seven and large membered heterocycles.

Paper name: Environmental Chemistry-(CHE401)

- (i) The course enables the students to learn composition of atmosphere, earth's radiation balance, chemical and photochemical reactions in atmosphere, air pollution, global warming and ozone depletion.
- (ii) The course helps students to enhance their knowledge about chemistry of hydrosphere and lithosphere
- (iii) The students can be acquainted with different water quality analytical methods like determination of DO, BOD, COD.
- (iv) The course provides deep insight of water pollution and air pollution.

Hemwati Nandan Bahuguna Central University

Under Graduate Course (B. Com. CBCS)

w.e.f.: 2017–18

Program Outcome: The career options for students pursuing B.Com. Program is vast and candidates will always have interesting profiles to work at if they play to their strengths. While B.Com. graduates may choose the much tried and tested path of CA, CS, CMA and other related fields of study, one has ample opportunity to choose an out-of the-box career option, as one in travel and hospitality, media and telecommunications depending on the path and degree one chooses.

Program Specific Outcomes: Earning a graduate degree of commerce (B.Com.) is evidence of persistence, determination, intellectual prowess, and the ability to handle challenging environments all of which are sought-after qualities for individuals filling manager and director positions. An employee who has demonstrated success in a long-term situation that requires stamina, discipline, leadership, and the ability to work well with others is going to be in line for growth opportunities within his or her organization. B.Com. graduate after completion of course can choose to work in job profile option available to them depending on their caliber and interest area such as Accountant, Auditor, Consultant, Company Secretary, Business Analyst, Finance Officer, Sales Analyst, Junior Analyst, Tax Accountant, Stock Broker, Economist, and Business Development Trainee and so on to explore.

B. Com. I Semester

1. Environment Studies (BC-101)

Outcome: Enabling the students to acquire the basic knowledge of Environmental Science.

2. Financial Accounting (BC-102)

Outcome: Helping students to acquire conceptual knowledge of the financial accounting and to impart skills for recording various kinds of business transactions.

3. Business Organization and Management (BC-103)

Outcome: Aiming to provide basic knowledge to the students about the organization and management of a business enterprise.

4. English Language (BC-104)

Outcome: Developing language skills of the students and making confident in English communication.

B. Com. II Semester

1. English/Hindi/Modern Indian Language (BC-201)

Outcome: The purpose of this course is to introduce students to the theory, fundamentals and tools of communication and to develop in them vital communication skills which should be integral to personal, social and professional interactions. One of the critical links among human beings and an important thread that binds society together is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and nonverbal. In the context of rapid globalization and increasing recognition of social and cultural pluralities, the significance of clear and effective communication has substantially enhanced.

2. Business Law (BC-202)

Outcome: Imparting basic knowledge of the important business legislation along with relevant case law.

3. Business Statistics (BC-203)

Outcome: Developing the understanding of basic concepts of statistics and skills to accomplish the solutions in the area.

4. Hindi/Modern Indian Language (BC-204)

Outcome: Developing language skills of the students and making confident in Hindi communication.

B. Com. III Semester

1. Company Law (BC-301)

Outcome: Imparting basic knowledge of the provisions of the Companies Act 2013. Case studies involving issues in company law are required to be discussed.

2. Income Tax Law and Practice (BC-302)

Outcome: Providing basic knowledge and equip students with application of principles and provisions of Income-tax Act, 1961 and the relevant Rules.

3. Hindi/Modern Indian Language (BC-303)

Outcome: Developing language skills and making confident in Hindi communication.

4. Computer Applications in Business (BC-304)

Outcome: Providing computer skills and knowledge for commerce students and to enhance the student understands of usefulness of information technology tools for business operations.

B. Com. IV Semester

1. Business Communication (BC-401)

Outcome: Equipping skills in reading, writing, comprehension and communication, as also to use electronic media for business communication.

2. Corporate Accounting (BC-402)

Outcome: Enabling to acquire the basic knowledge of the corporate accounting and to learn the techniques of preparing the financial statements.

3. Cost Accounting (BC-403)

Outcome: Understanding basic concepts used in cost accounting, various methods involved in cost ascertainment and cost accounting book keeping systems.

4. E-Commerce (BC-404):

Outcome: Enabling to become familiar with the mechanism for conducting business transactions through electronic means.

B. Com. V Semester

1. (BC-501):

a. Human Resource Management

Outcome: Acquainting students with the techniques and principles to manage human resource of an organization.

OR

b. Principles of Marketing

Outcome: Providing basic knowledge of concepts, principles, tools and techniques of marketing.

2. (BC-502):-

a. Fundamentals of Financial Management

Outcome: Familiarizing the students with the principles and practices of financial management.

OR

Goods and Services Tax (GST)

Outcome: Providing basic knowledge and equip students with applications of the provisions of Goods and Services Tax Act.

3. (BC-503) Principles of Micro Economics

Outcome: Providing basic knowledge and equip students with applications of economics and making understand concepts and theories of micro economics.

4. (BC-504) Entrepreneurship

Outcome: Orientation the learner toward entrepreneurship as a career option and creative thinking and behavior.

B. Com. VI Semester

1. (BC-601) a. Corporate Tax Planning

Outcome: Providing Basic knowledge of corporate tax planning and its impact on decision-making.

OR

b. Banking and Insurance

Outcome: Imparting knowledge about the basic principles of the banking and insurance.

OR

c. Fundamentals of Investment

Outcome: Familiarizing with different investment alternatives, introduce them to the framework of their analysis and valuation and highlight the role of investor protection.

d. Auditing and Corporate Governance

Outcome: Providing knowledge of auditing principles, procedures and techniques in accordance with current legal requirements and professional standards and to give an overview of the principles of Corporate Governance and Corporate Social Responsibility.

2. (BC-602) a. International Business

Outcome: Familiarizing the students with the concepts, importance and dynamics of international business and India's involvement with global business. The course also seeks to provide theoretical foundations of international business to the extent these are relevant to the global business operations and developments.

OR

b. Office Management and Secretarial Practice

Outcome: Familiarizing the students with the activities in a modern office. Smooth functioning of any organization depends upon the way various activities are organized, facilities provided to the staff working in the office, the working environment and the tools and equipments used in office.

OR

c. Management Accounting

Outcome: Imparting knowledge about the use of financial, cost and other data for the purpose of managerial planning, control and decision making.

OR

d. Consumer Protection

Outcome: Familiarizing with rights as a consumer, the social framework of consumer rights and legal framework of protecting consumer rights. It also provides an understanding of the procedure of redress of consumer complaints, and the role of different agencies in establishing product and service standards. The student should be able to comprehend the business firm's interface with consumers and the consumer related regulatory and business environment.

3. Indian Economy (BC-603):

Outcome: Enabling to grasp the major economic problems in India and their solutions. It also seeks to provide an understanding of modern tools of macro-economic analysis and policy framework.

4. Seminar and Comprehensive Viva-Voce (BC-604)

Outcome: Enhancing their presentation and communication skills, so that they can face the challenges of competitive world. The students will give two seminar presentations in the Department. In viva voce questions shall be asked based on the general awareness related to commerce, economics and accounts. Students should update their knowledge related to latest events in the field of Commerce, Economics and Management.

Sridev Suman Uttarakhand University

Bachelor of Commerce (B.Com)

Semester System

Effective from Academic Session 2018-2019

B. Com. I Semester

1. (BC-101) Principles of Management:

Outcome: Developing of an understanding about functions of management and importance of management principles in business decision making.

2. (BC-102) Business Environment:

Outcome: Introducing with broad range of economic concepts, theories and analytical techniques which help the management in decision making.

3. (BC-103) Micro Economics

Outcome: Introducing with broad range of economic concepts, theories and analytical techniques which help the management in decision making.

4. (BC-104) Business Law

Outcome: Providing basic knowledge of the provisions of the Companies Act 2013 along with relevant cases.

5. (BC-105) Financial Accounting-I:

Outcome: Helping to acquire conceptual knowledge of fundamentals of accounting and to impart skills for recording various kinds of business transactions.

6. (BC-106) Business Statistics

Outcome: Inculcating analytical ability.

B.Com. II Semester

1. Environment Studies (BC-201)

Outcome: Enabling the students to acquire the basic knowledge of Environmental Science.

2. (BC-202) Business Finance

Outcome: Imparting an understanding of Financial Aspects of Business.

3. (BC-203) Macro Economics

Outcome: Developing the understanding of the Macro Economic concepts such as income and employment, investment, inflation and open economy concepts which impact businesses.

4. (BC-204) Business Communication

Outcome: Familiarizing with fundamental knowledge and exposure to the concepts, theories, and practices in the field of Business Communication.

5. (BC-205) Financial Accounting-II

Outcome: Providing a brief idea about the framework of certain allied aspects of accounting treatment.

6. (BC-206) Fundamentals of Computer

Outcome: Gaining the knowledge of fundamentals of computer, basic electronics, database system and use of computer in a secure manner.

B. Com.III Semester

1. (BC-301) Marketing Management

Outcome: Imparting knowledge about the basic concepts, principles, tools and techniques of marketing management.

2. (BC-302) Company Law

Outcome: Imparting knowledge about the Provisions of the Companies Act amended up to 2013, formation of companies, corporate management practices, possible abuses of power by executives and government regulation on corporate businesses.

3. (BC-303) Money and Banking

Outcome: Imparting knowledge about the basic concepts of money and banking with particular reference to India.

4. (BC-304) Indian Economy

Outcome: Imparting knowledge about the main features of the Indian economic structure and its trends influencing the global business environment.

5. (BC-305) Cost Accounting-I

Outcome: Familiarizing with various aspects of costs and its determinants.

6. (BC-306)Corporate Accounting-I

Outcome: Imparting knowledge about the fundamentals of corporate accounting as per Companies Act 2013 and its use in corporate decision making.

B. Com.IV Semester

1. (BC-401) Human Resource Management

Outcome: Imparting basic knowledge of principles of human resource management and develop skills to acquire, reward, motivate, use and manage the employees in the organization.

2. (BC-402) Fundamentals of Insurance

Outcome: Developing an understanding among students about the various types of insurance, its principles and usefulness in business.

3. (BC-403) Indian Financial System

Outcome: Imparting the basic concepts, structure, organization and working of Indian Financial System.

4. (BC-404) Entrepreneurship

Outcome: Imparting basic knowledge of entrepreneurship, its development and issues related to Entrepreneurship in Uttarakhand.

5. (BC-405)Cost Accounting-II

Outcome: Familiarizing students with various aspects of cost ascertainment and its determinants.

6. (BC-406) Corporate Accounting-II

Outcome: Providing a brief idea about the framework of certain allied aspects of corporate accounting.

B. Com.V Semester

1. (BC-501)Project Management

Outcome: Providing adequate knowledge to the students for formulating and handling the project.

2. (BC-502) Research Methods

Outcome: Developing and understanding of the research methodology used in social sciences and its business applications.

3. (BC-503) Management of Financial Services

Outcome: Familiarizing about the various types of financial services/products and the recent developments in management of financial products.

4. (BC-504) Goods & Services Tax (GST)

Outcome: Providing basic knowledge and equip students with applications of the provisions of Goods and Services Tax Act.

5. (BC-505) Management Accounting

Outcome: Imparting knowledge of various management accounting tools and techniques useful for business decision making.

6. (BC-506) Working Capital Management

Outcome: Imparting knowledge about the basic principles, tools and techniques of working capital management with a view to develop skills to take informed business decisions.

B. Com.VI Semester

1. (BC-601) International Business

Outcome: Imparting knowledge of nature, scope and structure of International Business, and understand the influence of various environmental factors on international business operations.

2. (BC-602) Auditing & Corporate Governance

Outcome: Acquainting with Auditing & corporate governance.

3. (BC-603) E- Commerce

Outcome: Providing knowledge about E-commerce and various issues related to Ecommerce.

4. (BC-604) Seminar & Comprehensive Viva-Voce:

Outcome: Making aware about various philosophies and research work and how to make presentation effective.

5. (BC-605) Income Tax Law and Practice

Outcome: Enabling the student to understand the tax liabilities under the Acts, as well as, be able to file returns.

6. (BC-606) Organizational Behaviour

Outcome: Developing the basic understanding of students about basic concepts, theories and techniques in the field of human behaviour at individual, group and organizational levels.

Sridev Suman Uttarakhand University

2019-20 and onwards

B.Com. I Year

1. (BC-101) Principles of Management:

Outcome: Development of an understanding about functions of management and importance of management principles in business decision making.

2. (BC-102) Business Environment:

Outcome: Introducing with broad range of economic concepts, theories and analytical techniques which help the management in decision making.

3. Financial Accounting:

Outcome: Helping to acquire conceptual knowledge of fundamentals of accounting and to impart skills for recording various kinds of business transactions.

4. Business Statistics

Outcome: Inculcating analytical ability among the students.

5. Business Economics

Outcome: Introducing with broad range of economic concepts, theories and analytical techniques which help the management in decision making.

6. Business Law

Outcome: Providing basic knowledge of the provisions of the Companies Act 2013 along with relevant cases.

B.Com. II Year

1. Basic Business Finance

Outcomes: Understanding the conceptual framework of Business Finance.

2. Personnel Management:

Outcome: Providing basic knowledge to the students about procurement, development, compensation, integration and maintenance of the personnel of an organization.

3. Cost Accounting

Outcome: Exposing the basic concepts and the tools used in cost accounting.

4. Corporate Accounting:

Outcome: This course enables the student to develop awareness about corporate accounting in conformity with the provisions of company act.

5. Money, Banking and Insurance:

Outcome: Understanding the concept of Insurance along with the basic laws and practices of Insurance. Building up an ability to understand the terminologies associated with the field of Insurance and control along with their relevance, identifying the appropriate method and types of Insurance for solving different problems, applying basic Insurance principles to solve business and industry related problems, understanding the concept of Life, Marine and Fire Insurance.

6. Legal aspects of Business: Providing a brief idea about the framework of Indian Contract Act, 1872, Negotiable Instrument Act, Competition Act, 2002 and Sale of Goods Act, 1930, Companies Act 2013, Industrial Laws and Labour Laws.

B. Com. III Year

1. Marketing Management:

Outcome: Providing basic knowledge of concepts, principles, tools and techniques of marketing.

2. Management Accounting:

Outcome: Enabling to acquire knowledge of concepts, methods and techniques of management accounting for the purpose of managerial planning, control and decision making.

3. Income Tax Law and Accounts:

Outcome: It enables the students to know the basics of Income Tax Act and its implications.

4. Auditing and Corporate Governance:

Outcome: Aims at imparting knowledge about the principles and methods of auditing and their application.

5. Goods and Services Tax:

Outcome: Providing working knowledge of principles and provisions of GST to understand the relevance of GST in the present Indian tax in scenario and its contribution for economic development.

6. Fundamentals of Investment:

Outcome: Familiarizing with different investment alternatives, introduce them to the basics of their analysis, valuation and investor protection.

7. Business communication:

Outcome: Acquiring skills in reading, writing, comprehension and communication, and also to use electronic media for business communication.

Master of Commerce (M. Com.)

Effective from Academic Session 2018-2019

Program Outcome:

- Gains complete knowledge about all fundamental aspects of emerging areas like E-Business, Management Information system and Business Analytics
- Understands the background of Monetary system in India and Macro-economics to apply in Decision-making process and trends in B2B marketing, Statistical Analysis in Research.
- Appreciates the importance of Taxation in Indian context by learning Direct Taxes and Planning and Goods & Services Tax and Customs Law
- Gains overall knowledge about Commodity exchanges and trading in Stock Market and Portfolio Management and the intricacies of International Finance.
- Gathers attention about idea generation for research, Review of literature, Data collection methods, drafting research reports and insights about the various fields of research in Commerce.
- Learns about the potentials of Ind-AS, Companies Act, 2013 and Corporate Valuation in Mergers and Acquisitions, etc.
- Carry out assignments in the various aspects of Risk Management, Retail Banking,
 Corporate banking, Asset -Liability Management of Banks in India and their operations in detail.

M. Com. I Semester

1. (101) Corporate Accounting

Outcome: Apprising with the Accounting of companies as per Provisions of the Companies act 2013.

2. (102) Management Principles and Practice

Outcome: Providing an understanding of the concepts and principles of management.

3. (103): Business Environments:

Outcome: Apprising with various concepts of business environments so that their ability to take decisions in changing business environment can develop.

4. (104)Managerial Economics:

Outcome: Developing managerial perspective on economic fundamentals so that ability of taking decisions relating to business can grow.

5. **(105) E-Commerce**

Outcome: Familiarizing with the fundamentals of e-commerce as it is a fastest growing concept in the field of business.

M. Com. II Semester

1. (201) Financial Management

Outcome: Developing adequate level of knowledge of various areas of financial Management and to apprise the students about basic analytical techniques and methods relating to Financial Management of Organizations.

2. (202) Marketing Management

Outcome: Understanding of the conceptual framework of marketing and its applications in decision making under various environmental constraints.

3. (203) Human Resource Management

Outcome: Enables to understand procedures, processes and techniques relating to Human Resource Management of an organization.

4. (204) Management Accounting

Outcome: Imparts knowledge of various accounting tools and techniques useful for business decision making.

5. (205) Legal Aspects of Business

Outcome: Apprising with the provisions of various laws relating to legal aspects of business.

M. Com. III Semester

1. (301) International Business

Outcome: Familiarizing with the theoretical framework of International Business.

2. (302) Research Methods & Statistics

Outcome: enables to understand how to design and carry out business research by applying various statistical tools and techniques.

3. (303): Income Tax Laws and Practice

Outcome: Enabling to understand the various provisions of Income Tax Act.

4. (304) Financial Markets and Institutions

Outcome: Providing a sound information and knowledge of broad framework of Financial Systems and its constituents.

5. (305) Security Analysis and Portfolio Management

Outcome: Familiarizing with understanding of various techniques of security analysis and portfolio management.

OR

(304) Consumer Behaviour

Outcome: Developing the basic understanding of the concepts and theories of consumer behavior and their applications in the field of marketing decision making.

(305) Marketing Communication

Outcome: Enabling to gain understanding of the concepts, strategies and issues relating to marketing communication.

M.Com. IV Semester

1. (401) Entrepreneurship Development

Outcome: Developing the ability of entrepreneurship among students and to provide adequate knowledge to the students for formulating and handling projects.

2. (402) Banking And Insurance

Outcome: Imparting knowledge about the basic principles of the banking and insurance as there are numerous opportunities for jobs in Banking and Insurance sector.

(402) Project Report (Dissertation)

Outcome: Developing research skills and encouraging for innovation.

3. (403) Seminar and Viva Voce

Outcome: Developing the art of oral communication skill among the students so that they can face interviews for jobs. The students shall be expected to give several presentations during the semester with the final one on the day of the examination. The viva voce shall give them an opportunity to experience an interview. Regular quizzing sessions shall be held with the students throughout the semester under this course and also help them to gain the experience of a final interview before they go out seeking jobs in industry and also develop confidence in a face to face interaction in a formal setting. At the end of the semester, a viva voce shall be conducted with an external and internal examiner wherein the students shall be expected to answer questions related to both their project report and the courses studied in the IV semester, as well as, previous semesters.

Finance Group:

4. (404) Working Capital Management

Outcome: Working capital is a financial tool which represents operating liquidity available to a business .Acquiring knowledge of determining working capital of a business concern.

5. (405) International Financial Management

Outcome: Acquainting with Financial Management problems of multinational corporations and prepare them to tackle these problems.

OR

Marketing Group:

(406)Marketing of Services

Outcome: Enabling to understand the conceptual aspects of services marketing.

(407) International Marketing

Outcome: Enabling to understand the concept, implications and procedures of International Marketing.

DR. S.N. GOVT. P.G. COLLEGE KARANPRAYAG, CHAMOLI, UTTARAKHAND DEPARTMENT OF HISTORY

PROGRAMME OUTCOMES FOR U.G. CLASSES:

With reference to the course contents and its outcomes, after the completion of the three years degree course in history, it is believed that the students would be well versed and acquinted with the developments of historical data and facts, historical perspective of various subjects relating to ancient, medieval and modern developments of states all over the globe.

History enables the learners to build up a professional career as teachers in school and higher education, archaeologist, museum curator etc. history prepares them to become a good citizen, policy maker, educationist, researcher etc.

COURSE OUTCOMES FOR U.G. CLASSES:

B.A. FIRST YEAR -

Paper 1- History of India (Earliest times to 185 B.C.)

- 01. They present course will be useful in providing a comprehensive understanding to the evaluation of early Indian society.
- 02. Students will be able to examine institutional basis of ancient india.
- 03. They will also be able to indicate multiple cultures of ancient india along with development of empires.
- 04. Students will be able to explain our heritage through cultural aspects of ancient India.

Paper 2- History of India (185 B.C. to 1206 A.D.)

- 01. The students will develop a critical awareness of various categories of sources for the study of ancient Indian history.
- 02. They will learn the analytical skills to explore the development of indias religious systems and cultural accomplishments in historical perspectives.
- 03.It will develop and understanding of the growing culture and political and economic linkages between north and south Indians.
- 04. The students will also get familiarized with the development of historical process in decan and far south.

05. The paper develop the understanding of the process of transition from ancient period to the early medieval period.

B.A. SECOND YEAR

Paper 1- history of India (1206 A.D. to 1707 A.D.)

- 01. Students will be familiarizing to the theories of state feudalism, political structure and periodization in history based on early medieval period and medieval period of Indian history.
- 02. Students will learn about the foundation, expansion and consolidation of sultanate of delhi and also to the downfall of the delhi sultanate.
- 03. They will learn towards the emergence of provincial dynasties and consolidation of regional identities like, bahamani, and vijaynagar empire.
- 04. They can learn about the activities of delhi sultanate like; revenue systems monetization, market regulations, growth of urban centers, and commerce, Indian trade etc.
- 05. Students can get idea of religious syncretism; rise of sufi and bhakti and their impact on Indian society.
- 06. They will also familiarize with Islamic and hindu art and architecture, language, culture and religious during medieval period of india.
- 07. The student will be able to understand the territorial expansion of various Indian kings and impact of medievalism on Indian society and culture.

Paper 2 – World history (1453 A.D. to 1815 A.D.)

- 01. Students of history will learn about the rise of the modern west world and transition the society and economy from feudalism to capitalism.
- 02. They will learn how to rise of renaissance in Italy and spread of humanism in Europe and results of the European reformation in the 16th century and shift of economic balance from the meduterranean to the atlantic, commercial revolution, influx of American revolution.
- 03. The student will be able to learn the rise of reformation movement against the roman catholic and how reformation impact globally.
- 04.It will be enable the student to compose an effective narration that analyses the history of western world.
- 05. They will able to evaluate the ways in wchich the history of the early western civilization in forms the current political, cultural and social

- history of Europe after fifteen century and its relationship to the global culture.
- 06. They will be learn about the glorious revolutions, American revolutions, French revolutions and its impact of European countries. Unity and power makes people to strength which has showed in the French revolution in 1789. How the industrialization had accurred and it's affected on socio economic transformation of Europe.

B.A. FINAL YEAR

Paper 1- History of india (1707 A.D. to 1947 A.D.)

- 01. Students will learn how to rise regional powers in india after the downfall of the mughal empire and in the course of time how to rise of the company's absolute power in india. They can understand about the colonial nature of state during 200 years rule of the british power in this land.
- 02. They can gather knowledge about how the Indian society, politics, religion and economy had changed during the company's rule in India.
- 03. They will understand how the company's economic exploitation made Indian revolutionary against the British rule. That ultimately paved the background of the great revolt of 1857.
- 04. Students will able to formulate basis of modern India through different concepts like modernity, rule of law etc.
- 05. They will able to analyze the process of rise of modern India and its foundation which was made by social reformers and freedom fighters.
- 06. Along with they will analyze social background of Indian nationalism.
- 07. Students will understand relation between modernity and nationalism and its implications.
- 08. They will also acquire knowledge about the transition of India into colonized society and economy.

Paper 2- World History (1815 A.D. to 1945 A.D.)

- 01. This course will impart knowledge to the students regarding the political transformations of the modern world that took place from the eighteen century till the end of 1945.
- 02. Student will know about the politics of super power among the European countries. How the sense regarding the nationalism and

- unification had developed among the European countries on eve of the second world war.
- 03. Students can understand about the rise of imperialism and how far german imperialism was responsible for the first and second world war.
- 04. The students will be able to know about the political history of the world since the end of the first world war focusing on the change and continuity over time and space.
- 05. The course will impact knowledge on the economic developments of the period in an analytic way.

PROGRAMME OUTCOMES FOR P.G. CLASSES -

Attempts is made for students to develop their own ideas, critical thinking and express it in their own words. The students are expected to pass on their ideas and knowledge to others which is acquired through the courses completed by the students.

Students are expected to use their analytical ability for in-depth studies which is acquired through the copurses covered by them.

The students after they have completed the courses are expected to have a sound judgement on historical data and evidence and should be able to have a critical analysis of the subject.

Student should have a practical insight of the various historical arguments and various historical theories brought forward by historians. Develop an understanding of the process of conducting a research project in the field of history.

COURSE OUTCOMES FOR P.G. CLASSES:

FIRST SEMESTER-

FIRST PAPER - HISTORIOGRAPHY- CONCEPT AND TRADITIONS

- 01. The paper examines the methodological understanding of history in a specific manner.
- 02.It acquits the students on different traditional historical writings and scientific history writing.
- 03.It exposes the ideas of research area, representation in history and the challenges of writing in history.

- 04. The paper highlights the Indian historiographical trends and the sources vividly.
- 05. It discusses understanding and approaches of Indian history writings.
- 06. The paper educates the students on the contemporary developments on the Indian history writings.

SECOND PAPER - SOURCES OF INDIAN HISTORY

- 01. Students will study of historical area of different languages and being visited.
- 02. The paper educates the students on the contemporary developments on the Indian history writings.
- 03. Students will distinguish between primary and secondary sources and identify and evaluate evidence.
- 04. Students will demonstrate in discussion and written work thire understanding of different peoples and cultures in past environments and how those cultures changed over the cources of the centuries.

THIRD PAPER – WORLD HISTORY (1453 A.D. TO 1789 A.D.)

- 01. The student will be able to learn the rise of reformation movement against the roman catholic and how reformation impact globally.
- 02.It will be enable the student to compose an effective narration that analyses the history of western world.
- 03. They will able to evaluate the ways in wchich the history of the early western civilization in forms the current political, cultural and social history of Europe after fifteen century and its relationship to the global culture.

FOURTH PAPER – POLITICAL HISTORY OF ANCIENT INDIA (HARAPPAN PERIOD TO 1206 A.D.)

- 01. The students will understand the importance of the political processes in the ancient india.
- 02. They will learn how the political ideas develop during ancient period.

SECOND SEMESTER-

FIRST PAPER- POLITICAL HISTORY OF GREAT BRITAIN (1815 A.D. TO 1919 A.D.)

- 01.Students will be able to know about the major concepts of british political history and will be able to describe and analyse the political development of u.k. and will be aware of current political situation of U.K.
- 02. They will also be able to search and analyse socio-political and cultural life of u.k. and its najor concepts.

SECOND PAPER - POLITICAL AND CULTURAL HISTORY OF UTTARAKHAND

- 01.On the completion of the course, students will able to understand the sources of the history of uttarakhand .
- 02. They know the prehistoric, unafraid and historic lands.
- 03. Understand the ancient dynasty of kunindas, pauravas, katyuris and post katuris, chand and gorakhas of uttarakhand.
- 04. They will know about the social movements of uttarakhand.
- 05. They will know the cultural, social and religious system, values and tradition of uttarakhand.

THIRD PAPER- WORLD HISTORY (1789 A.D. TO 1945 A.D.)

- 01. This course will impart knowledge to the students regarding the political transformations of the modern world that took place from the eighteen century till the end of 1945.
- 02. Student will know about the politics of super power among the European countries. How the sense regarding the nationalism and unification had developed among the European countries on eve of the second world war.
- 03. Students can understand about the rise of imperialism and how far german imperialism was responsible for the first and second world war.
- 04. The students will be able to know about the political history of the world since the end of the first world war focusing on the change and continuity over time and space.
- 05. The course will impact knowledge on the economic developments of the period in an analytic way.

FOURTH PAPER – POLITICAL HISTORY OF MEDIEVAL INDIA (1206 A.D. TO 1707 A.D.)

- 01.Students will be familiarize to the theories of state feudalism, political structure and periodization in history based on early medieval period and medieval period of indian history.
- 02. Students will learn about the foundation, expansion and consolidation of sultanate of delhi and also to the downfall of the delhi sultanate.
- 03. They will learn towards the emergence of provincial dynasties and consolidation of reginal identities like, bahamani, and vijaynagar empire.
- 04. They can learn about the activities of delhi sultanate like; revenue systems monetization, market regulations, growth of urban centers, and commerce, Indian trade etc.
- 05. Students can get idea of religious syncretism; rise of sufi and bhakti and their impact on Indian society.
- 06. They will also familiarize with Islamic and hindu art and architecture, language, culture and religious during medieval period of india.
- 07. The student will be able to understand the territorial expansion of various Indian kings and impact of medievalism on Indian society and culture.

THIRD SEMESTER -

FIRST PAPER - SOCIAL, ECONOMIC AND CULTURAL HISTORY OF INDIA (HARAPPAN PERIOD TO 1206 A.D.)

- 01. Students will be able to know about the richness of the Indian culture during the ancient period.
- 02. They understand the socio- economical, cultural life of the above mentioned period.
- 03. They get to know how hindu society influenced that of the other contemprory civilizations.

SECOND PAPER – SOCIAL, ECONOMIC AND CULTURAL HISTORY OF INDIA (1206 A.D.- 1707 A.D.)

01. The student will have a fair idea about agrarian system, land revenue policies, trade and commerce, advancement of technology and growth of urbanization in medieval india.

- 02. Student will able to appreciate the ancient wisdom of building and art and understand the continuity of the same as heritage.
- 03. They can know about the richness of the Indian culture during the medieval period and familiar with the sources and the different approaches to the religious history of medieval india.
- 04. They will understand the basic concepts associated with the different aspects of socio- cultural life of the above mentioned period.
- 05. They will understand the hindu and muslim customs, traditions, languages, literature, art and architecture.
- 06. They will develop critical understanding of both the methodologies of archaeology and literature and they will be able use both the sources effectively.

THIRD PAPER - WORLD HISTORY (1945 A.D. TO 2000 A.D.)

- 01. Students will learn about the post- war developments of social, political and economic scenarios of the world and decolonization and the emergence of the third world. As they will learn origin of the cold war and changing world political scenarios and emerging trends in culture, media and revolution among European countries.
- 02. Explain the aftermaths of the world war second on the world politics.

FOURTH PAPER -

(A) ECOLOGY AND ENVIRONMENT IN HISTORY-

- O1. The culture, economy, social and political life of any reason has a deep relation with ecology and environment of that reason. So it is very important to learn about ecology and environment of any reason to understantd its history. So in this paper students will be able to understand and explain the scope of environment and its relations with other subjects.
- 02. They will also know about the various environmental movements and their impact on social awareness for environment.
- 03.It will also inhance environmental consciousness in students about ancient, medieval and modern india.

(B) TOURISM IN INDIA -

01. Students will be able to understand the importance of tourism and its various impacts on the society, culture, religion and economy of india.

- 02. They will also able to know and understand regional sources of tourism in uttarakhand through its vibrant culture, fairs like kumbha and nanda raj jat yatra and its importance to generate economy of uttarakhand.
- 03. They will also know about the various religious places and temples of uttarakhand and their socio- economical and cultural impact on the society.
- 04.As india has the divers culture and traditions so under this unit students will be able to understand the varied culture customs and the religios norms and its impact on the tourism of the India.

(C) WOMEN IN INDIAN HISTORY -

- 01. The paper introduces learners to a historical analysis of the lived experience of women at specific historical moments in the indian subcontinent.
- 02.It explores the concerned issues within interdisciplinary fromwork.
- 03. The students will also be familiarized with the theoretical reflection on the study of women's issues with reference to latest researchers in the field.
- 04. The course seeles to make students reflect on the specificity of women's issues in different times and context.

FOURTH SEMESTER -

FIRST PAPER- RESEARCH METHODOLOGY -

- 01. The aim of the course is to provide students with an introduction to research methods and report writing.
- 02. Students are expected to develop understanding on various kinds of research, objectives of doing research, research process and research design.
- 03. They have basic knowledge on qualitative research techniques.

SECOND PAPER – POLITICAL HISTORY OF MODERN INDIA (1707 A.D.- 1857 A.D.)

01. This is an advanced cource on indian history during the first hundred years of british colonial rule. Firstly, it addresses the debate on 18th century india. Next it deals with the expansion and consolidation of british power in india.

- 02. The ideologies of british raj will be analysed. The colonial construction of india, the administrative, economic and social policies of the british will be delineated.
- 03. Further the impact of the colonial policies and programmes on Indian polity, economy and society will be focused.

THIRD PAPER – NATIONAL MOVEMENT AND CONSTITUTIONAL DEVELOPMENT OF INDIA (1858 A.D. – 1950 A.D.)

After successful completion of the course, the students will be able to:-

- 01.Identify how different regional, religious, linguistic and gender identities developed in the late 19th early 20th centuries.
- 02.Outline the social and economic facts of colonial india and their influence on the national movement.
- 03. Explain the various trends of anti colonial struggles in colonial india.
- 04. Analyse the complex developments leading to communel violence and partition.
- 05. Discuss the negotiation for independence and key debates on the constitution and need for socio- economic restructuring soon after independence.

FOURTH PAPER – SOCIAL, ECONOMIC AND CULTURAL HISTORY OF INDIA (1707 A.D.-1950 A.D.)

- 01. The students will be to trace the british colonial expansion in the political contexts of eighteenth to mid twenty century india.
- 02. They will learn about the changes in society, politics, religious and economy during this period.
- 03. They will also acquire knowledge about the transition of india into a colonized society and economy.
- 04. Students will be aware about in which situation the Indian nationalism had raised among the Indian people for freedom.
- 05. They will acquire knowledge about the freedom struggle. They will understand the growth of western education and its effects on the different societies of india.

Department of Botany

Programme outcome

M.Sc Botany

On completion of program students will be able to

- Develop critical and scientific thinking and ability to apply the process of formulating hypothesis and design experiments based on scientific method.
- Develop the ability to analyse and interpret results in botanical studies such as Plant Biostatistics, modern techniques of Plant taxonomy, Plant Breeding, Plant Molecular Biology, Plant Biotechnology, Plant Cell and Tissue Culture, Genetic Engineering, Bioinformatics, Bioremediation, Genomics, Proteomics, Metageonomics etc.
- Use quantitative reasoning by using mathematical calculations and graphing skills to solve problems in plant science.
- Effective Communication and collaborate with other disciplines by effectively communicating the fundamental concepts of Botany in written and oral format.
- Understand the relationship between science and society by recognizing and discussing logical, scientific and ethical issues in Ethnobotany.
- Environment and Sustainability: Understand the issues of environmental contexts and sustainable development with respect to assessment, conservation and utilization of biodiversity.
- skill in handling scientific instruments, planning and executing biological concepts; thus making students become ready to opt further either in research or teaching in plant science.
- Prepare for various state and national level competitive exams like NET,SLET,GATE,ICAR, PCS, IAS etc.

Course outcome

M.Sc 1 semester

Paper 1: Microbiology (Bacteria, Viruses and Lichens)

After studying this unit students shall be able to

- Understand the concept and characterization of Microorganisms.
- Learn about Methods of isolation and culture of microorganisms;
- Differentiate between Morphology and structure of Bacterial cells and viruses.
- Know Role of microorganism in different aspect.
- understand structure and reproduction of lichens.

Paper 2: Mycology and Plant Pathology

After studying this unit students shall be able to

- Understand General characteristics, recent trends of classification and Phylogeny of Fungi
- General account of Mycorrhiza, industrial importance of fungi

 History of Plant Pathology, Symptoms, mode of transmission and control measures of various Plant diseases

Paper 3: Phycology and Bryology

After studying this unit students shall be able to

- Know different types of Algal habitats, Thallus organization, Algal Classification, Phylogeny interrelationships of Algae
- Knowledge of different life cycles, Economic importance, Physiology and Biochemistry of Algae
- Morphology, Classification, Phylogeny of various groups of Bryophytes
- Ecology of Bryophytes, Distribution of Bryophytes in Himalaya,Fossil Bryophytes

Paper 4: Pteridophytes, Gymnosperms and Palaeobotany

After studying this unit students shall be able to Know

- History, Origin, classification, present and past Distribution of various groups of Pteridophytes
 - Classification and Distribution of Gymnosperms in India
- Economic importance of Gymnosperms, Type study of various groups of Gymnosperms
 - Elementary Palaeobotany

M.Sc 2 Semester

Paper 5: Taxonomy of Angiosperms

After studying this unit students shall be to Know

- Origin of intra-population variation, Species Concept, Salient features of ICBN, Various types of Taxonomic evidences and Taxonomic Tools
- Systems of Angiosperms Classification
- Herbaria and Botanical Gardens
- Status of Flowering plant diversity in Garhwal Himalaya

Paper 6: Cytogenetics and Molecular Biology

- Structural organization of the plant cell, Structure and functions of Cell Wall and Plasma membrane
- Structure and functions of some Cell Organelles
- Basic Principles of Inheritance,
- Structural and Numerical Changes in Chromosomes
- Nuclear DNA content; C- value paradox, Cot curves

Paper 7: Economic Botany

After studying this unit students shall be to Know

- Plant Resources: Concept, Status, Utilization and Concerns, World Centers of Primary Diversity of domesticated plants
- Cereals and Millets, Legumes, Sugarcane and Starches, Forage and Fodder Crops
- Intellectual property rights, Copyright and Patents
- Basic concept of Ethnobotany, Green Revolution
- Plants used as Ornaments and avenue trees
- Principles of Conservation

Paper 8: Plant Morphology, Anatomy and Embryology

After studying this unit students shall be to Know

- Shoot Development:Organization of shoot apical meristems, Root apical meristems
- Morphology of flower, stamen and Carpel, Male gametophyte: Structure of anther, microsporogenesis, Female gametophyte: ovule development: megasporogenesis
- Pollination, Pollen-pistil interaction and fertilization, self incompatibility, double fertilization, seed development and fruit growth
- Polyembryony; apomixis, Embryo culture, Dormancy
- Tissue- General account, stem and root anatomy(Dicot and Monocot), Anomalous Secondary growth

M.Sc 3 Semester

Paper 9: Plant Physiology and Biochemistry

- Fundamental aspects of plant cell structure: Colloidal systems, Water potential, Diffusion, Osmosis and Imbibition, Energy flow:Principles of Thermodynamics, Carbohydrates, Amino acids, Proteins and Lipids, Fundamentals of Enzymology
- Membrane transport and translocation of water and solutes, Plant Water relations, Absorption and Transpiration of Water
- Photophysiology and Photosynthesis, Photosynthetic apparatus, Photo-oxidation of water, Light reaction, Z scheme and photophosphorylation, mechanism of electron transport, carbon assimilation, factors affecting photosynthesis
- Respiration and lipid metabolism, Photorespiration
- Nitrogen fixation, Nitrogen and Sulphur metabolism
- Phytohormones and Sensory photobiology, photophysiology of light-induced responses

Paper10:Plant Ecology and Remote Sensing

After studying this unit students shall be to Know

- Climate, soil and vegetation patterns of the world, Population dynamics, concept of community and continuum, ecological niche, Ecological succession
- Ecosystem: Structure and functions, Global biogeochemical cycles of C, N, P, S and hydrological cycle,
- Ecosystem stability: Resistance and resilence, Environmental impact assessment, Ecosystem restoration
- Biological diversity: concept and level, Phytogeographical regions of India, IUCN categories of threat, hot spots of biodiversity, Environmental Pollution
- Climate Change: Greenhouse gases, Ozone layer depletion, Co sequestration, Fire as an ecological factor
- Remote Sensing: Photographic and non-photographic sensors, Space platforms, Applications of remote sensing in ecological research

Paper 11: Plant Biotechnology

After studying this unit students shall be to Know

- •Biotechnology:Principles and scope,Plant Cell and Tissue Culture;its applications, callus Culture, cell suspension Culture, Cryopreservation, Clonal Propagation, organ Culture,Protoplast Culture, Artificial seeds, hybrids and Cybrids, Somaclonal variations.
- Recombinant DNA technology: Tools of genetic engineering, Cloning vectors, Genomic and c DNA libraries
- Hybridization- Colony, Southern, Northern, Western. DNA Sequencing techniques,IPR, Genomics and Proteomics

Paper 12:Environment Management with reference to Western Himalayas

After studying this unit students shall be to Know

- Introduction to the Environment Management, Major Environmental Problems, Environmental ethics, EIA, Assessment and Risk Zonation
- Environmental Management and Natural Resources, Different types of Pollution, Watershed management
- Key stone species, Species diversity and edge effects, Climate shift, Species movements
- Biodiversity and Conservation, Insituand exsitu Conservation, Carbon sequestration

Semester 4

Paper 13:Plant Breeding and Biostatistics

- The role of Plant breeding, various techniques of plant breeding in self and cross pollinated crops, Hybridization: Interspecific and intergeneric, Pureline, back cross Hybridization, Heterosis
- Breeding for resistance to diseases, physiological races, role of Mutation in crop Improving and evolution
- Plant breeding in potato, paddy, wheat and sugarcane, Seed production and seed certification
- Biostatistics and its applications in life sciences, Method of representation of statistical data and measurement of central tendencies
- Correlation, regression, Probability, chi square test

Paper14: Conservation Biology

After studying this unit students shall be to Know

- Conservation: The basic concept, Pattern of Biodiversity, Uses of Biodiversity, Threats to Biodiversity, Genetic Drift, Climate change, Overexploitation, Invasive species
- Global Environmental problems, Extinction of species, Red and Green data books, EIA
- Conservation of Energy Resources, Protected Area Network, CITES, CBD, IUCN, MAB, UNEP, UPOV

Paper 15: Invitro-technologies and industrial applications

After studying this unit students shall be to Know

- Micropropagation of floricultural, agricultural and pharmaceutical crops, Production of virus free plants, germplasmConservation, Somaclonaland gametoclonal variations,
- Culture systems, Problems in Plant tissue Culture, Hardening, Use of Bioreactors in secondary metabolites Production, Interactions, training and workshops in Biotech industries and placements.

Paper16:Forest Ecology

- Forests, forestry and man, Essential elements of forest Ecology, Forests and trees, wild life, Biosphere reserves, soil erosion and conservation Potential Productivity
- Soil erosion and conservation, Potential productivity of Forests, Forest conservation and Management, Impact of deforestation on soil and water, Role of fire, Forest resource management
- Forest cover in India- state of the art, Application of Remote sensing and GIS in Land cover mapping.

Department of Botany

Programme outcome

B.Sc Botany

On completion of program students will gain-

- Knowledge and understanding about Plant Diversity.
- Practical skill in the field and Laboratory experiments.
- Presentation skill in life sciences.
- Scientific knowledge about Biodiversity exploration and its conservation.
- Opportunities to teach Biology in schools after applying for B.Ed. in India, become an online tutor working from home, opt for M.Sc. for higher education, apply for jobs available for B.Sc. Botany Graduate like in forest Department, nursery or green house managers.

B.Sc I Year

PSOI. The basic concept of Algae, their classification, vegetative structure and comparative study of some genera.

PSO2. The basic concept of fungi, their ecology, their pathology and comparative study of some of the genera.

PSO3. Bacteria, Viruses and Lichens based upon their morphology, ecology and chemical composition.

PSO4. Basic concept of bryophyta, their economic importance, their role as pollution indicator and place among the organisms.

PSO5.Pteridophyta; their economic importance, structure and function.

PSO6.Gymnosperms; their habitat, distribution, classification; general idea about fossil and process of fossilization.

PSO7. Systems of classification of angiosperm, basic knowledge about botanic garden, herbaria and ICBN.

PSO8.Cell and their organelles and their function.

PSO9. Process of microsporogenesis and megasporogenesis; general concept of seed germination, dormancy, plant growth hormone and physiology of flower.

PSO10 Nucleic acid and genetic code, laws of inheritance, plant breeding and crop improvement methods.

PSO11.DNA, RNA; molecular markers, gene regulation, PCR and DNA fingerprinting.

PSO12. Anatomy of root, stem and leaf, types of plant tissue, secondary growth.

PSO13. Principles of environment, habitat, population, community structure, ecological succession, ecological pyramid, biogeochemical cycle-C, N; Biodiversity and conservation, general idea about pollution.

PSO14Plant physiological process-diffusion, transpiration, mineral nutrition, respiration and photosynthesis.

PSO15. Amino acid, proteins, enzymes, carbohydrate, fats and lipids.

PSO16.Basic knowledge and commercial utilization of selected plants like cereals & millets, sugar yielding plant, fruits, fibres, vegetable, timbers,, medicinal plants, oils, beverages, spices and condiment.

PSO17. Sampling, measures of central tendency, correlation coefficient, chi square test.

PSO18.Basic concept of biotechnology, genetic engineering, plant tissue culture,

industrial and agricultural biotechnology, SCP and mycotoxin.

BOTANY 1styear

Paper1Fungi, Elementary Microbiology and Plant Pathology

- COl.Introduction, salient features and history of fungi.
- CO2. Classification of fungi (ainsworth) and salient features of the important groups ofFungi.
- CO3. Somatic structure of fungi, nutritional and environmental needs of fungi.
- CO4. Reproduction in fungi, heterothallism, heterokaryosis, a general idea of parasexual cycle.
- CO5.Importance of fungi-both beneficial and harmful.
- CO6.Structure, methods of reproduction and life history of the genera in brief:
- Synchytrium, Saprolegnia, Albugo, Rhizopus, <u>Penicillium</u>, Saccharomyces,
- Phyllactinia, Eryspiphe, Puccinia, Ustilago, Agaricus and Alternaria
- CO7.Lichens: characteristics, general structure, reproduction, economic importance, symbiotic relationship and habitats.
- CO8. Diversity of microbes, elementary principles of isolation and purification of microorganisms.
- CO9.General account of bacteria: structure, classification, nutrition, reproduction gram positive and gram negative bacteria, and economic importance.
- CO10.Viruses: characteristics, isolation and purification of viruses, chemical nature, replication, transmission of viruses, economic importance.
- CO11.General symptoms of plant diseases and principles of infection and resistance; general methods of chemical and biological control of the plant diseases.
- CO12. Symptoms, morphology of the causal organism, disease cycle and control

measures of the following diseases: wart disease of potato, white rust of crucifers, powdery mildew of shisham, black rust of wheat, red rot of sugarcane.

Paper II: Algae and Bryophytes

- CO1.Introduction and salient features of algae and their place among the organisms.
- CO2. Classification of algae (Fritsch's and Smith's) up to class level.
- CO3.Range of thallus organization, vegetative structure and Cell structure in algae.
- CO4. Various types of Reproduction and alternation of generation in algae

CO5. Ecology of algae

- CO6. Economic importance of algae as food, fodder, in agriculture, industry and public health.
- CO7. Structure, reproduction and life cycles of the genera-Nostoc, Chlamydomonas, Volvox, Oedogonium, Chara, Vaucheria, Sargassum, Polysiphonia, Diatoms
- CO8.Introduction, features, distribution, habitat and economic and ecological importance of Bryophyta.
- CO9. Classificatio of Bryophyta (ICBN) upto order level giving the characteristic features of each class.
- CO10.Comparative study of *Riccia*, *Marchantia*, *Porella*, *Anthoceros* and *Funaria* on the basis of morphology and anatomy of gametophyte, vegetative, sexual reproduction and sporophyte.
- CO11. Alternation of generation, spore dispersal in Bryophyta.

Paper 3: Pteridophytes, Gymnosperm and Elementary Palaeobotany

- CO1.Introduction and salient features of Pteridophytes and economic importance.
- CO2. Alternation of generation in Pteridophyta.
- CO3. Classification of Pteridophytaupto order level(proposed by Pichi-Sermolli).
- C04. Comparative study of Rhynia, Lycopodium, Selaginella, Equisetum,
- Adiantum, Marsilea on the basis of morphology and anatomy of vegetative plant body, spore producing organs and sexual reproduction.
- CO5.Stelar system, Heterospory and Seed habit
- CO6.Introduction and salient features of Gymnosperms and their place among the plant kingdom.
- CO7. Classification of gymnosperms upto order level (proposed by Pichi-Sermolli)
- C08.Alternation of generation, distribution and economic importance of
- Gymnosperms.

C09. Comparative study of Cycas, Pinus and Ephedra on the basis of morphology and anatomy of the vegetative plant body.

CO10. Fossils; their types and process of fossilization, general idea about various geological eras and living fossils.

B.Sc Ilnd Year

Paper1: Taxonomy of Angiosperms and Economic Botany

CO1. Angiosperms origin and evolution, Comparasion and evolution of the system of classification as proposed by Linnaeus, Betham and Hooker and Hutchinson.

CO2.International Code of Botanical Nomenclature. History, scientific naming of plants, priority, types, validity, nominaconservanda.

CO3.Botanical gardens and Herbaria and Botanical Survey of India.

CO4.Distinguishing features of the following families DicotyledonaePolypetalae : Ranunculaceae,

Brassicaceae, Caryophyllaceae, Rutaceae, Malvaceae, Rosaceae and Apiaceae, Gamopetalae: Solanaceae, Apocynaceae, Acanthaceae, LamiaceaeMonochlamydae: Euphorbiaceae, Polygonaceae Monocotyledonae: Orchidaceae, Liliaceae, and Poaceae.

CO5.Origin of Cultivated Plants

CO6. Cereals and millets- Wheat, Rice, Maize, Bajra and some important Legumes:

CO7.Oils:Castor oil, linseed oil and mustard oil.

.CO8. Fruits- Mango, apple, banana, Citrus and Litchi.

CO9. Fibres- Cotton, jute, flax, hemp, coir.

CO10. Vegetables- Root vegetables, stem vegetables and fruit vegetables.

CO11. Timbers- Teak, Shisham, Sal, Chir and Deodar.

CO12.Medicinal plants- Aconitum, Atropa, Cinchona, Rauwolfia, Ephedra and Withania.

Paper II: Anatomy, Embryology and Elementary Morphogenesis

COI. Different techniques for the study of plant anatomy.

CO2.Meristematic and Permanent tissues: Root and Shoot apical meristems and their function; Simple, Complex and Special types of tissues.

CO3. Epidermis and stomata

CO4. Anatomy of dicot and monocot root, stem and leaf.

CO5.Secondary growth: vascular cambium, structure and function; seasonal activity (growth rings),

CO6. Secondary growth in root and stem; sap wood, heart wood, anomalous secondary growth in *Bougainvillea*, *Salvadora*, *Nycthanthes*, *Dracaena*, Orchids and *Tinospora*..

CO7. Structure of anther and pollen, microsporogenesis and male gametophyte.

CO8. Structure and types of ovules, megasporogenesis and female gametophyte.

CO9. Pollination mechanism, Fertilization, self incompatibility, double fertilization.

CO10.Endosperm, Embryo; structure and functions; dicot and monocot embryo.

CO 11.General concept of morphogenesis.

CO12. Seed germination and dormancy.

CO13.A general account of Plant Growth Regulators.

CO14. Physiology of Flowering- Photoperiodism and Vernalization.

Paper Ill: Ecology and Remote Sensing

CO1.Plant and environment: Principles of environment, atmosphere, light, temperature, water, soil.

CO2. Ecosystem concept, energy flow, food chain, food web and ecological pyramids and ecological niche.

CO3.Productivity;types, measurement of primary productivity, energy flow and ecological energetics, Lindeman's concept of Energy Flow.

CO4.Biogeochemical cycles with emphasis on carbon, nitrogen and phosphorus cycles.

CO5.Population: Growth curves, population characteristics, growth curves, carrying capacity and population fluctuation. ecotype and ecads.

CO6.Definition of community; Structure and attributes of community: frequency, density, cover, life forms and biological spectrum; ecological succession

CO7. Preliminary idea of environmental pollution, prevention and control of pollutions-air, water, soil, noise and radioactive pollution

CO8. Cause and effect of Global warming, desertification and ozone depletion. Describe the Biogeographical regions of India; Vegetation types in Uttarakhand Explain basic concept of Biodiversity and its conservation.

CO9. Concept of Soil erosion and conservation.

CO10.Definition of remote sensing, aerial photography, principles and fundamentals of aerial photo interpretation, role of remote sensing in ecology.

B.ScIllrd Year

Paper 1. Cytogenetics, Molecular Biology and Biotechnology

CO1.Cell structure: Prokaryotic and Eukaryotic cells; and models of plasma membrane).

CO2. Describe structure and functions of cell organelles: Mitochondria, Chloroplast, Endoplasmic reticulum, Golgl complex, Ribosome, Microbodies (Lysosomes, Peroxisomes, Glyoxisomes); structure and function of Nucleus and Nucleolus CO3.Cell division: cell cycle, process and significance of mitosis and meiosis, structure and function of synaptonemal complex and crossing over.

CO4. Eukaryotic Chromosome composition, Karyotype analysis, Ideogram; structure and functions of Polytene and Lampbrush chromosomes.

CO5. Describe structure and fitnction of nucleic acid and different forms of DNA (A, B, Z).

CO6.Genetic code: properties of genetic code, classical and modern concept of gene.

CO7.DNA replication; replication error and repair mechanism.

CO8.Introns, exons, transposons, molecular basis of gene mutation

CO9. Molecular markers: A general idea of RAPD (Random Amplified Polymorphic DNA), RFLP (Restriction Fragment Leng Polymorphism) VNTR (Variable Number of Tandem Repeats).

CO9.Polymerase chain reaction techniques (PCR). A brief idea of DNA finger printing.

CO10.Laws of inheritance: Mendel's experiments, principle of segregation, independent assortment, incomplete dominance.

CO11.Chromosomal aberration- Structugral(deficiency, duplication, inversion& translocation) and numerical (Euploidy& Aneuploidy), alteration in chromosomes.

CO12.Sex determination: sex chromosomes, sex determination in Drosophila, Man and plants specially Melandrium,

CO13.Sex linked inheritance

CO14.Introduction of Biotechnology: Role in modern life, history and ethical issues connected with Biotechnology.

CO15.Genetic Engineering: Enzymes and vectors involved in genetic engineering, Recombinant DNA technology, tools and techniques of genetic engineering.

CO16.Plant tissue culture technique: Basic requirements of Tissue culture Laboratory, different types of media and their composition, basic technique of tissue culture, types of culture on the basis of explants, collection and storage of gemplasm(Cryopreservation), PTC with reference to somaclonal variations, synthetic seeds, somatic hybridization and hairy root culture.

CO17. Industrial Biotechnology and Agricultural Biotechnology: Crop (yield /quality) Improvement, bio fertilizers and biological control.

CO19. Microbial biotechnology; Mycotoxin based health hazards and their control, single cell protein.

Paper II: Plant Physiology and Elementary Biochemistry

- CO1. Diffusion, osmosis, water potential and its components, Plasmolysis, Imbibition and Absorption of water.
- CO2.Root pressure and guttation, Transpiration and its significance, Factor affecting transpiration, mechanism of stomatal opening and closing.
- CO3.Mineral nutrition: Essential elements, macro and micro nutrients, criteria of essentiality of elements, role of essential elements, minerals deficiency symptoms.
- CO4. Translocation in phloem: composition of phloem sap, girdling experiment, pressure flow model, phloem loading and unloading.
- CO5. Respiration: aerobic and anaerobic respiration. Glycolysis and Kerb's cycle. Oxidative phosphorylation, electron transport system, fermentation, RQ.
- CO6. Photosynthesis: photosynthetic pigments. Photo system I and II, electron transport system and ATP synthesis. Path of carbon in C3 plants (C3 cycle), C4 plants (C4 cycle), CAM pathway, photorespiration,
- CO7.Enzymes; Properties, classification, mechanism of enzymes action and factors affecting enzyme activity.
- CO8. Amino acids and proteins: Classification, structure and chemical bonds in protein structure and properties. (An elementary account with special reference to plants)
- CO9.Biological Nitrogen fixation and nitrate and ammonia assimilation in Plants
- CO10.Structure, functions and biological roles of Carbohydrates and Lipids in Plants.

Paper 3:Plant Breeding and Biostatistics

- CO1.Plant breeding- aims and objectives, basic techniques of plant breeding (selection, plant introduction and acclimatization, hybridization and mutational breeding, hybrid vigour.
- CO2. National seed Corporation (NSC), seed testing laboratories, International and National Centre of plant breeding.
- CO3. Biostatistics and its applications.
- CO4.Measures of central tendency:Mean, Median and Mode.
- CO5. Classification, tabulation and graphic presentation of data.
- CO6. Measures of dispersion-range, variance, standard deviation, standard error.
- CO7.correlation: correlation coefficient, Chi-square test.

B.Sc. Mathematics

Sem	nester-1	
Trigonometry and appli pursu Calculus By the range matrix The series a function of the series applied to the		The programme outcome is to give foundation knowledge for the students to understand basics of mathematics including applied aspects for developing enhanced quantitative skills an pursuing higher mathematics and research as well. By the time students complete the course they will have wide ranging application of the subject and have the knowledge of matrices and basics of differentiation. The student will be able to sum the trigonometric series of real and complex numbers and separate the trigonometric function in form of A+iB. The main objective of the course is to equip the student with necessary analytic and technical skills. By applying the principles of differentiation, he learn to solve a variety of practical problems in science and engineering. The student is equipped with standard concepts and tools at an intermediate to advance level that will serve him well towards
2	Integral Calculus and Vector Analysis	taking more advances level course in mathematics. The programme outcome is to give foundation knowledge for the students to understand basics of mathematics including applied aspect for developing enhanced quantitative skills and pursuing higher mathematics and research as well. By the time students complete the course they will have wide ranging application of the subject and have the knowledge of surface area and volume of shapes. The main objective of the course is to equip the student with necessary analytic and technical skills. By applying the principles of integral, he learn to solve a veriety of practical problems in science and engineering. The student is equipped with standard concepts and tools at an intermediate to advance level that will serve him well towards taking more advances level course in mathematics.
3	Group Theory and Analytic	Group theory is one of the building blocks of modern algebra. Objective of this course is to introduce students to basic concepts of Group and their properties.

	Geometry	This course will let the students to basic course in advance mathematics and geometry The subjects learn and visualize the fundamental ideas about
		co-ordinate geometry and learn to describe some of the surface by using analytical geometry.
		On successful completion of the course student have gained knowledge about regular geometrical figures and their properties. They have the foundation for the higher course in geometry.
		On successful completion of the course students should have knowledge about higher different mathematics methods and will help him in going for higher study and research.
4	Ordinary Differential Equations Theory	The objective of this course is to familiarize the student with various methods of solving differential equations of first and second order and to have qualitative applications.
	Theory	A student doing this course is able to solve differential equations and is able to model problems in nature using ordinary differential equations. After completing the course a students will be able to take more courses on Wave equation, Heat equation, Diffusion equation, Gas dynamics, non linear evolution equation etc.
		Ring theory is one of the building areas of modern algebra. Objective of this course is to introduce students to basic concept of Ring. Integral domain and other structures with their properties. This course will lead the students to basic course in advanced mathematics and Algebra.
5	Real Analysis	Students will be able to know the basic concepts and
	& Functions of Several	development of Real Analysis which will prepare the students to take up further applications in the relevant fields.
	Variables and	
	Partial Differential	On successful completion of the course students should have knowledge about Real Analysis and will help him to in going
	Equations	for higher studies and research.
		The main objective of the course is to equip the students with necessary analytic and technical skills. The course in Partial Differential Equation intends to develop problem solving skills for solving various types of partial differential equation especially Hyperbolic, Parabolic and Elliptic type PDE.

Methods and Graph Theory Theory Upon successful of various types After successful able to understant graphs. This cour computer science Path Circuit Adjate the knowledge of		The student will be able to find integral transform Laplace Transform, Inverse Laplace Transform and Fourier Transform. The course in mathematical methods basically develops a problem solving skill in students. Upon successful completion students will have the knowledge of various types of graph their terminology and applications. After successful completion of this course students will be able to understand the Isomorphism and Homomorphism of graphs. This course covers the basic concept of graphs used in computer science and other disciplines. The topic includes Path Circuit Adjacency matrix, Trees and Colouring. After successful completion of this course students will have the knowledge of Graph, Colouring, Colour Problem and	
		Vertex Colouring.	
7	Number Theory and Relativity	The student will be able to solve problem in elementary Number Theory and also apply elementary Number theory to Cryptography. Upon successful completion students will be able to describe the basic concept of theory of relativity. After successful completion of this course students will be able to discuss postulates of the Special Theory of Relativity and their Consequences.	
8	Numerical Analysis and Operations Research	After successful completion of this course students will be able to perform error analysis for Arithmetic operations. Upon successful completion students will be able to understand the use of Interpolation, Curve Fitting and Fin Differences. After successful completion of this course students will be able to use some solution methods for solving linear programming problem	
9	Complex Analysis and Mechanics	The course is aimed at exposing the students to foundation of analysis which will be useful in understanding Various physical phenomena and give the student the foundation in mathematics.	

		Upon successful completion students will be able to understand Complex Variable, Analytic function, Complex Integration and Residues. The object of the paper is to give students knowledge of basic mechanics such as Simple Harmonic Motion, Motion under other Laws and Forces. The student after completing the course can go for higher problems in mechanics such as hydrodynamics this will be helpful in getting employment in industry
10	Linear Algebra and Metric Spaces	Linear Algebra is a basic course in almost all branches of science. The objective of the scores is to introduce a student to the basic of Linear Algebra and some of its Applications. After successful completion of the course students should be able to understand the concept of Linear Transformation. On successful completion of the course students should have knowledge about metric spaces connectedness and compactness.

M.Sc. Mathematics

SEN	SEMESTER-1			
1	Discrete MM-101 On successful completion of the course, students will be able		On successful completion of the course, students will be able	
Structures to: Relate mathematical concepts and terminole in the domain of Computer Science.		to: Relate mathematical concepts and terminology to examples in the domain of Computer Science.		
Model real world problems using various mathematica constructs.		Model real world problems using various mathematical constructs.		
			Use different proofing techniques; construct simple mathematical proofs using logical arguments. Formulate mathematical claims and construct counterexamples.	
			Understand more about Recurrence relations, Linear homogeneous recurrence relations, non-homogeneous	

			recurrence relations, solutions of recurrence relations.	
			recurrence relations, solutions of recuirence relations.	
			Understand the Partially ordered sets, Different types of lattices, Direct product, Ideal lattice, Modular and distributive lattices.	
			Become familiar with Boolean algebra, Ideals in Boolean algebra, Boolean rings, Boolean functions, Karnaugh diagrams, Application of Boolean Algebra to switching theory.	
			Understand the basics of graph, Directed graphs, Undirected graphs, Relaions and graphs, Path and circuits, Eulerian and Hamiltonian graphs, Planner graphs, connected graphs.	
2	Abstract Algebra-I	MM-102	Familiarize Simple groups, Conjugacy, Normalization, Centre of a group, Class equation of a group and its consequences, Theorems of finite groups, Cauchy's theorem, Sylow theorems	
			Understand Homomorphism, Endomorphism, Automorphism, Inner automorphism, Kernel of a homomorphism, Understand and apply Fundamental theorem on homomorphism of group, Group of automorphism, Results on group homomorphism.	
			Learn about Maximal subgroup, Composite series, Jordan-Holder theorem, Solvable groups Commutator subgroup, Direct products,	
			Understand Polynomial rings, Units and associates in polynomial rings, division and Euclidean algorithm of polynomials, Unique factorization theorem.	
3	Complex Analysis	MM-103	Learn about Power series of analytic functions, Convergence of power series, Radius of convergence; obtain Taylor and Laurent series expansions, Residue and poles, singularities, Classification of singularities.	
			Understand Residue, residue at infinity and apply Cauchy Residue theorem to evaluate integrals.	
			Students learn Conformal mapping: properties, Mobius transformation, Elementary examples.	
4	Omovotions	MM 104	Learn the significance of Maximum modulus theorem, Mittag- Leffler theorem, Rouche's theorem, analytic continuation.	
4	Operations	MM-104	To acquaint with Operations research, Methodology of	

	Research-I		Operations research, features of Operations research problems, Different models in operations research, Opportunities and shortcomings of operations research approach. Students learn about Dual Simplex method, Revised Simplex method, Sensitivity analysis.	
			Learn to solve Assignment and transportation problems.	
CEN	reciped 4		Understand Theory of game, Integer linear programming.	
5 SEN	IESTER-2 Abstract Algebra –II	MM-201	Understand Embedding of rings, Ring of residue classes, Fundamental theorem on homomorphism of rings, Prime and Maximal ideals.	
			Learn about Euclidean ring, Properties of Euclidean ring, Module, sub-module, Module homomorphism, linear sum and direct sum of sub-module.	
			Familiarize extension fields, simple field extension, algebraic field extensions, minimal polynomial, roots of polynomials, Multiple roots, splitting field.	
			Understand Automorphism of field, Fixed field, Normal extension, Galois Theory and its applications, construction with straightedge and compass.	
6	Differential Equations	MM-202	Recognize and solve Ordinary differential equations: Qualitative properties of solution, Oscillation, Wronskian, Sturm separation and comparison Theorem, Picard Iteration methods, Uniqueness and existence theorem. Acquaint with Ordinary point, regular and singular points, Frobenius series solution for Legendre's and Bessel's differential equations with generating function. The course will enable the students to formulate, Classification and solve PDE of second order and Canonical form, Concept of separation of variable solution. Find solution of heat diffusion, Laplace and Wave equations	
			non linear partial differential equation of second order.	
7	Operations Research-II	MM-203	Acquaint with Inventory control, Functional role if inventory control, Classification of EOQ models with shortages and without shortage	

	Classification of queue, M/M/I queuing models, server queuing models. Learn about Markov chain, Application of Markov state and transition probabilities, steady state consequencing problems. FamiliarizeDynamic programming, Non-linear programmin		Learn about Markov chain, Application of Markov analysis, state and transition probabilities, steady state conditions,
8	the sets of usual or unusual entities. Become aware of formulations leading to metric spaces Metric spaces, Closed sets, Closure, Interior, Exterior, Dense and not Sets, Sequence and subsequence in metric space, Commetric spaces. Understand convergent sequence, Cauchy sequences of convergent sequences, continuous function in a method throughout the completeness, Uniform continuity. Learn some very important properties of metric space completeness, compactness and connectedness, Command continuous mappings, Cantor's Intersection theorem.		Understand convergent sequence, Cauchy sequences, algebra of convergent sequences, continuous function in a metric space,
	IESTER-3	T	
9	Topology	MM- 301	Learn definition of Topological spaces, Open sets, Closed sets, Closure, Interior, Exterior, Dense and non dense Sets, Bases and sub bases, subspaces, Product spaces and relative topology. Study about continuous function, Homeomorphism, Connectedness, Connected and disconnected sets, Local connectedness, Component, Locally connected spaces. Cantor's intersection theorem, Baire's category theorem Acquire basic concepts Compact spaces, Sequentially compact spaces, Local compactness, Continuity, compactness and B-W property.
10	Differential Geometry	MM- 302	Study Curves in space; Arc length, Order of contact, Tangent, Normal, Binormal, Osculating plane, Serret-Frenet formulae, Curvature and torsion. Osculating circle and osculating sphere, Helix, Bertrand curves.

			Understand the behaviour of a curve in the neighbourhood of a point. Concept of a surface, Envelope and developable surface, Parametric curves, Family of the surfaces, Edge of regression, Ruled surfaces, Central points. Learn Fundamental forms and curvature of surfaces: First fundamental form. Second fundamental form of the surfaces of revolution, Weingarten's equation, Direction coefficients, Family of curves. Acquaint with Local non-intrinsic properties of a surface Normal curvature, Principal directions, Principal curvatures, Minimal surface, Lines of curvature. Rodrigues and Monge's Theorem, Euler's theorem, Joachimisthal's theorem, Dupin's indicatrix. Third fundamental form	
11	Real Analysis	MM- 303	9	
12	Calculus of Variations	MM- 304(a)	Understand Variation of function: Necessary condition for an extremum. Euler's equation, Fixed end point problem for unknown functions. Variational problems in parametric form. Functional depending on higher order derivatives and variational problems with subsidiary condition. To acquaint with Isoperimetric problem, Invariance of Euler's equation under co-ordinate transformation, General variational of functional, Variable end point problems. Transversality condition transversal theorem, Weierstrass-Endmann corner condition.	

			Learn Cononical form of Euler equations and their first integrals. Cononical transformation, Noether's theorem, The principle of least action, Conservation law, Hamilton Jacobi's equations, Jacobi's theorem.
			Learn the second variation of a functional and the formula for second variation, Legendre's necessary condition. Jacobi's necessary condition, Conjugate point, Sufficient condition for a weak extremum
SEMI	ESTER-4	I	
13	Measure Theory and Integration	MM- 401	A deep understanding into basics and applications of Lebesgue outer measure and measurability of sets.
			Learn conceivement of the idea of Lebesgue Measurable Functions and Lebesgue Integration.
			Understanding and applications Lebesgue integral and comparisons with Riemann Integral.
			Familiarizing General Measure Space and Measurable Functions and Integration over General Measure Space Introduction to product measure and their applications.
	Functional Analysis	MM- 402	Familiarize with Normed linear Spaces, Banach spaces, Subspaces, Quotient Spaces, Equivalent norm.
			Acquaint with Bounded linear Transformation/operator, Hahn-Banach Theorem, Open mapping Theorem, Closed Graph Theorem, Uniform Boundedness Principle.
			Familiarize Inner Product Space, Hilbert space and Orthogonal complements and projection Theorem, Riesz Representation Theorem. Orthonormal Sets.
			Learn operator on Hilbert space, Self-adjoint, Unitary and Normal Operators, Orthogonal projection operator.
	Linear Integral Equations	MM- 403	Understand Classification of integral equations, Relation between Differential and Integral equations, Fredholm Integral equations, Fredholm Integral equations of second kind with separable kernels, Eigen values and eigen functions.
			Understand Volterra integral equations, Resolvent kernel of Volterra equation, Convolution type kernel, Integral equations with symmetric kernel.
			Learn method of successive approximation for Fredholm and

		Volterra equations of the second kind.	
		Understand Classical Fredholm theory, Singular integral equations, Hilbert type integral equations, Integral equation with Green's function type kernels.	
Fluid	MM-	Learn about some fascinating study about fluid motions,	
Dynamics	404(c)	Kinematics of fluids, Lagrangian and Eulerian methods, Local and individual time rates of change, Equation of continuity, Boundary surface.	
		Learn Equation of motion of inviscid fluids, Euler's equation of motion, Bernouille's equation, Lagrange's equation, Conservative field of force, Cauchy's Integral, Helm-Holtz's equation.	
		Understand Impulsive motion of a fluid, Energy equation of inviscid fluid, General theory of irrotational motion, Connectivity, Flow and circulation, Kelvin's circulation theorem, Stoke's theorem, Permanence of irrotational motions, Green's theorem, Kinetic energy of finite and infinite liquid, Kelvin's minimum energy theorem, Mean value of the velocity potential over a spherical surface.	
		Solve Motion in two dimensions, Stream function, Complex potential, Source, Sink, Doublet, Complex potential and images with respect to straight line and circle, Milne-Circle theorem, Blausius theorem.	

Dr. Shivanand Nautiyaal Govt. P.G. College Karanprayaag (Chamoli)

(DEPARTMENT OF ENGLISH)

The Programmes learning and Course Outcomes By:-

(B.A. in English)

The students under going this course is sure to acquire a comprehending understanding of literary forms, the history of English language, literature and literary works including samples of Indian and World literature. The course would hone student's skill to critically evaluate and appreciate literary works, to extend the ability to other cultural artistic forms. The course shall attune English language skills essential for employability and for vertical professional mobility. The course shall foster teaching, translation, research and extension activities for creation of new knowledge for the development of society. As the course envisages the inculcation of human values in the learner, it shall help in the creation and development of manpower that would provide intellectual leadership to the community and shall enable the learner to become a world citizen endowed with a sensibility attuned to the concerns of the world English language has growing importance in the globalized world. Learning of English literature has always been considered as means to proficiency in the language. A solid foundation in English language and literature helps the learners' progress in their respective careers. The syllabus of this course covers the whole gamut of concerns in literary studies.

	B.A I &]	II Semester
Course no	Name of Paper	Programme Outcomes
Course Code: UGENG- CC101	Introduction to English Prose	Programme Objective:- To developing a basic understanding of English language and literature for all the students and learners efficiency and effective progress.
		 Course Outcomes:- Comprehend the various forms of essay writing and compare and contrast the different prose forms and their characteristic. To developing an understanding of the diverse techniques of prose writing and reading. Understand the prescribed prose styles through select readings of representative texts.
Course Code: UGENG- CC103	History of English Literature	Programme Objective:- Extending the comprehensive overview of the various periods of history of English literature and sensitize students to the aesthetic, cultural and

social aspects of literature.
Course Outcomes:-
 Understand the development of English literature through historical timeline.
• Understand the influence of major religious, political and social movements on literature.
 Develop familiarity with major literary works of major English writers.
 Comprehend the defining ethos and characteristics of different periods in English Literatures
 Develop a comprehensive understanding of the history of English Literature.

	B.A I	II & IV Semester
Course no	Name of Paper	Programme Outcomes
Course Code: UGENG- CC201	British Poetry	Programme Objective:- Generating an understanding of British literature, Indian literature in English thorough readings of seminal texts.
		Course Outcomes:-
		 Identify various forms of poetry and understand the development of these forms in the works of greatest practitioners of these poetic forms. Familiarize the students with the growth and trends of English poetry. Enable the students to appreciate and critique poetry. Compare and contrast the works of the British poets
Course Codes UGENG- CC203	Drama	Programme Objective:- Developing an understanding of the literary texts on the basis of genre, theme, style and place of origin.
		Course Outcomes:-
		• Appreciate drama as a genre of literary expression.
		• Acquaint the students with an introductory knowledge of the development English drama.
		• Understand nature, elements, functions, forms and structure of drama.
		Interpret, analyse and evaluate plays in the

perspective of literary history and theory.

	B.A V &	& VI Semester
Course no	Name of Paper	Programme Outcomes
Course Coo UGENG- ME204	de: Fiction	Programme Objectives:- Developing an understanding of the literary texts on the basis of genre, theme, style and place of origins. Course Outcomes:-
		 Gain an introductory knowledge of the development and significance of literature in English. Have an introductory study of fiction. Apprehend nature, elements, functions and forms of fiction and define its basic elements such as plot, plot- structure, characterization, and narrative technique. Critically evaluate the style and contributions of some of the greatest novelists. Understand important terms pertaining to fiction, including various stylistic and figurative devices. To acquaint the students with the growth of English Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature.
Course Coo UGENG-CC3	de: Partition Literature	writing skills and a comprehensive knowledge of the vocabulary so that the students can use their communicational skills effectively.
		 Course Outcomes:- Acquaint the students with the background of partition and impact of partition. Interpret, analyse and evaluate partition literature in the perspective of literary history and theory

Programme Learning Outcome:-• Acquire an understanding about the basic characteristics of the Indian International Literature with the structural composition of its national necessity and importance of the preface of English literature. Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature. Code: Research Project: An Programme Objective:-Course Provide students an extensive view of the **UGENGRP-303** Introduction cultural and social patterns of the society in the specific time and situations. Course Outcomes:-Understand overall process of research, formulate research problem, research design and research methods. Understand the importance of research and research methodology. Learn how to conduct good research. Understand the performance and status of various sectors of English literature and behavior communication skills in this modern To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature.

Course Code:	Regional Literat	ture	Programme Objective:-
UGENG-CC304	with Spe	ecial	Provide students an extensive view of the
	Reference	to	cultural and social patterns of the society in
	Literature	of	the specific time and situation.
	Uttarakhand		
			Course Outcomes:-
			After the successful completion of the course, the student shall be able to:
			• Study the language and literature of Kumauni and Garhwali region.
			• Develop understanding of the key concepts and themes of Regional literature.
Course Code:	Indian and I	New	Programme Objective:- Develop an insight into
UGENG-CC305	Literatures	in	classical literature.
	English		
			Course Outcomes:-
			Identify distinctive features of Indian and new
			literatures in English.
			Understand the trajectory of development of
			Indian poetry in English.
			Compare and contrast the pre-independent and
			post-independent writings in English.
			Identify the thematic and stylistic variations in
			different genres in Indian writing in English
			Develop knowledge of the seminal Indian
			English writers and texts.
			• Develop an understanding of the various
			connotations of the term "New Literatures"
			and difference from other terms like
			Commonwealth Literature etc.

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	Subje	ect: Englis	sh									
Course/ Entry –			Subject I	Subject II	Subject III	Subject IV	Vocational	Co- curricular	Research Project	Te	otal	
	Year	Sem	Major	Major	Major	Minor/ Elective	Minor	Minor	Major		1-1	
		deep chartery		Own	Any	4 Credits OtherDept	3 Credits	2 Credits	4 Credits			
	-	-		Faculty	Faculty	/Faculty				-	-	
Certificate	1	I Theory Paper Credit 6	Introduction to English Prose			Creative	Communic ative English Grammar					
Paper	1Theory	History of English Literature			Writing	English Listening and Speaking Skills						
Diploma in Arts	11	III 1Theory Paper Credit 6	British Poetry			Profession al English	Language through Literature					
		IV 1Theory Paper Credit 6	Women's Writing and Indian Literature in Translation				Functional English and Translatio					
	And the state of t	V 2 Theory Paper Credit 5 Each	Introduction to Literature and Film						Research Project: An Introduct ion			
Bachelor of Arts	111	White continues to the continues of the	Partition Literature						P 30			
		VI 2 Theory Paper Credit 5 Each	Literature of Uttarakhand		The state of the s				Preparin g a Research Proposal			
The state of the s			Indian and New Literatures in English				7.7					

Programme outcomes (POs):

The programme aims to:

- Develop an appreciation of English language, its connotations and interpret and appreciate the didactic purpose of literature.
- Develop in students a deep-rooted pride in being Indian.
- Unravel the historical, social and cultural context of each literary work and thereby make connections between literature and society & appreciate literature's ability to empower us emotionally.
- Sensitize students to the aesthetic, cultural and social aspects of literature
- Present an extensive view of the cultural and social patterns of the society in the specific time and situations in which it flourished resulting in an intellectual and emotional engagement with the work.
- Make students aware of the different kinds of literature written/translated in various English-speaking countries across the world as well as the literature from Asia.
- Develop a more complex understanding of the history, literature, narrative techniques, Drama techniques, kinds of fiction and drama from Britain, America and India.
- · Augment the understanding of fundamental tenets of classical literature
- Develop an understanding of the various connotations of the term 'New Literatures' and the difference from other terms like Commonwealth Literature etc.
- Develop an insight regarding the idea of world literature and the pertinent issues of feminism, racism and diasporic relocations
- Provide job opportunities through 'skill-based' courses
- Instill in students anew zeal and a new vision of life to make them better citizens.
- Recreate a response through creative indulgences like script-writing, dialogue writing, and be able to exploit his/her creative potential through digital media.
- Engage students with various strategies of drafting and revising, style of writing and analytical skills, diagnosing and developing scholarly methodologies, use of language as a means of creative expression, will make them effective thinkers and communicators.
- Empower students with knowledge of existing research methodologies and critical thinking.
- Comprehend and contextualise contemporary films adapted from literature, to describe objectively its importance and usefulness for the society while analysing its plot and characters.
- Comprehend translation as a useful bridge between various linguistic regions
- Assist students towards English language comprehension, intellectual flexibility, creativity, and cultural literacy so that they may engage in life-long learning
- Acquire basic skills to pursue translation as research and career
- Introduce the learners to the nuances of the changing media scenario in terms of production of media content
- Inculcate in them the skills of reporting, editing and feature writing in print medium to have a career perspective in media and journalism.
- Strengthen their grasp of the interrelationship between Culture and Society
- · Help students prepare for various national and international competitive exams

The Programmes learning and Course Outcomes By:-

(M.A. in English)

	M.A (Englis	h) SEMESTER - I
Course no	Name of Paper	
PG/Eng(C)/1)1	Paper - I (English Literature from Chaucer to John Milton)	Objective of the Paper: The course objective is to make a student learn basic principles of English languages and international literature. which will help him/her to utilise them for understanding the languages communications skills, behaviour of individual personality development.
		 Course Outcome:- Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface Understand the performance and status of various sectors of English literature and behavior communication skills in this modern
		 To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature.
		 To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the world To understand the Read, write and spoken competition in English literature and literature. To understand the concept of all the syllabus concept and conditions of allocative efficiency under perfectly competitive fields.

PG/Eng(C)/1	Paper - II (Drama	Programme objectives:-
02	Excluding Shakespeare)	The aim of the course is to acquaint the students with English literature and communication skills, theory and concepts which will help them to understand the real-world communication situations and changes and to understand the basic concepts in the different languages. Some of these concepts are as followings National and International Literature and Languages.
		Course Outcome:-
		 Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the prefac Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the world To understand the Read, write and spoken competition in English literature and every institutes across
PG/Eng(C)/1 03	Paper - III (Early Humanist's	the world. Programme Objectives :-
	Literature)	The aim of the course is to acquaint the students with English literature and communication skills, theory and concepts which will help them to understand the real-world communication situations and changes and to understand the basic concepts in the different languages. Some of these concepts are as followings: National and International Literature and Languages.
		Course Outcome:-
		 Understand major issues and advantages

		along with meaning of the Importance of Literature. • Learn National and International Literature scope, efficiency, implementation, Improvement along withunderstanding. • Understand and to know deeply about the National and International Literature, Essays, Novels, Dramas, Writers, Plays etc. • Learn the objectives and tools of Fiscal policy along with impact of changes in the English Literature and languages. • Learn functions of learning, reading, writing along with understanding the quantity theory of English Literature and process of credit creation for the students.
PG/O(C)/1)4	Paper - IV (English Prose)	Programme objectives:- The aim of the course is to acquaint the students with English literature and communication skills, theory and concepts which will help them to understand the real-world communication situations and changes and to understand the basic concepts in the different languages. Some of these concepts are as followings National and International Literature and Languages.
		 Course Outcome:- Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the prefac Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age.

	M.A (En	glish) SEMESTER - II
Course no	Name of Course	Programme Outcomes

PG/Eng (C)/2 01	Paper – V (William Shakespeare)	Programme Objectives :-
		Developing intellectual, personal and professional abilities through effective communicative skills; ensuring high standard of behavioural attitude through literary subjects and shaping the students socially responsible citizens. To enhance employability of the students by developing their linguistic competence and communicative skills.
		 Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English literature. Understand the performance and status of various sectors of English literature and behavior communication skills. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature.
PG/Eng (C)/2)2	Paper - VI (18th Century Literature)	Programme Objectives:- The course objective is to make a student learn basic principles of English languages and international literature. which will help him/her to utilise them for understanding the languages communications skills, behaviour of individual personality development.
		Course Outcome: Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English literature.

		Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the world and spoken competition in English literature and literature. To understand the concept of all the syllabus concept and conditions of allocative efficiency under perfectly competitive fields.
PG/Eng (C)/2 03	Paper – VII (American Literature)	Programme Objectives:- The main objective of this paper to introduce The course objective is to make a student learn basic principles of English languages and international literature. which will help him/her to utilise them for understanding the languages communications skills, behaviour of individual personality development. Course Outcome:- • Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English literature. • Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. • To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature.
		To understand the concept of all the syllabus concept and conditions of allocative efficiency under perfectly competitive fields.

PG/Eng (C)/2	Paper – VIII (19th	Programme objectives:-
1 G/Eng (C)/2	Century Literature)	Basic demographic concepts and their
J- 1	Century Literature)	languages understanding and communication
		• •
		skills for the whole over developments. As well
		as the utilization of the outcomes knowledge to
		the society and world. Then compose the unique
		nations.
		Course Outcome:- • Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English
		literature.
		Understand the performance and status of
		various sectors of English literature and
		behavior communication skills in this
		modern age.
		To study the trend and
		experiments in the literature and spoken
		languages with the unique performance of
		every learners and students of the every
		institutes across the worldTo understand the
		Read, write and spoken competition in English
		litera Understand the influence of major
		religious, political and social movements on literature.
		 Develop familiarity with major literary works of major English writers.
		• Comprehend the defining ethos and characteristics of different periods in English Literatures.
		ture and Understand the influence of major religious, political and social movements on
		literature.
		• Develop familiarity with major literary works
		of major English writers.
		Comprehend the defining ethos and
		characteristics of different periods in English
		Literatures.

PG/Eng (C)/2)4	1	Programme objectives: Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English literature. Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. To study the trends and experiments in the literature and spoken languages with the unique performance every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature. Understand the development of English literature through historical timeline. Course outcomes: Understand the influence of major religious, political and social movements on literature. Develop familiarity with major literary works of major English writers. Comprehend the defining ethos and characteristics of different periods in English Literatures. Understand the influence of major religious, political and social movements on literature. Develop familiarity with major literary works of major English writers. Comprehend the defining ethos and characteristics of different periods in English Literatures. Comprehend the defining ethos and characteristics of different periods in English Literatures.
PG/Eng (C)/3 01	Paper – X (20th Cent Poetry)	Programme Objectives:- The aim of the course is to acquaint the students with English literature and communication skills, theory and concepts

		which will help them to understand the real-world communication situations and changes and to understand the basic concepts in the different languages. Some of these concepts are as followings: National and International Literature and Languages. Course Outcome: Understand major issues and advantages along with meaning of the Importance of Literature. Learn National and International Literature scope, efficiency, implementation, Improvement along withunderstanding. Understand and to know deeply about the National and International Literature, Essays, Novels, Dramas, Writers, Plays etc. Learn the objectives and tools of Fiscal policy along with impact of changes in the English Literature and languages.
PG/Eng (C)/3 02	Paper - XI (Indians Writing in English)	 Programme objectives:- Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English literature. Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age.
		Course outcomes: To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the world.
PG/Eng (C)/3 03	Paper – XII (a) Literary Criticism-I (Anyone From A or B) Elective – A	Programme objectives:- • Acquire an understanding about the basic characteristics of the Indian and International Literature with the structural composition of its national necessity and importance of the preface of English

		literature. • Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age.
PG/Eng (C)/3	Paper – XII (b) Literary	1 2 2
04	Criticism-II Elective – B	and writing skills and a comprehensive knowledge of the vocabulary so that the students can use their communicational skills effectively. Course Outcomes:-
		Acquaint the students with the background of partition and impact of partition. Interpret, analyse and evaluate partition literature in the perspective of literary history and theory of completw literature of the universal truth.

M.A (English) SEMESTER - IV		
Course no	Name of Course	Programme Outcomes
PG/Eng (C)/4	Paper - XIV (20th	Programm Objective:- Extending the
PG/Eng (C)/4)1	Century Drama)	comprehensive overview of the various periods of history of English literature and sensitize students to the aesthetic, cultural and social aspects of literature. Course Outcomes: Understand the development of English literature through historical timeline. Understand the influence of major religious, political and social movements on literature. Develop familiarity with major literary works of major English writers. Comprehend the defining ethos and
		characteristics of different periods in English Literatures.

PG/Eng (C)/4	Paper - XV (Literary	Objective:- Generating an understanding of British
02	Criticism)	literature, Indian literature in English thorough
		readings of seminal texts.
		Course Outcomes:-
		Identify various forms of poetry and
		understand the development of these forms in
		the works of greatest practitioners of these
		poetic forms.
		Familiarize the students with the growth and
		trends of English poetry.
		Enable the students to appreciate and critique
		poetry.
		Compare and contrast the works of the British
		poets
PG/Eng (C)/4		Objective:- Developing reading and writing skills
03	(Literature of	1
	Indian Diaspora (Anyone From A	
	or B) Elective - A	communicational skins effectively.
	of b) Elective - A	Course Outcomes:-
		• Acquaint the students with the background of
		partition and impact of partition.
		Interpret, analyse and evaluate partition literature
		in the perspective of literary history and theory
PG/Eng (C)/4	Paper – XVI (b)	Objective:- Develop an insight into classical
04	(Colonial / Post	literature.
	Colonial	Course Outcomes:-
	Literature and	Identify distinctive features of Indian and new
	Theory) Elective -	literatures in English.
		Understand the trajectory of development of
		Indian poetry in English
		• Compare and contrast the pre-independent and
		post-independent writings in English
		dentify the thematic and stylistic variations in the
		hational and international literature of the literary
DC/E (C)/4	Doman VVII (a)	scopes and fields.
PG/Eng (C)/4 04	Paper – XVII (a) (World Classics in	The course objective is to make a student learn
υ -1	Translations)	basic principles of English languages and
	(Anyone From A	international literature, which will help him/her
	or B) Elective -	to utilise them for understanding the languages
	, 2000	communications skills, behaviour of individual
		personality development.
		Programmo Loarning Outcome.
		Programme Learning Outcome:-
		Acquire an understanding about the basic characteristics of the Indian and
		International Literature with the structural
		International Enterature with the structural

	composition of its national necessity and importance of th preface of English literature. • Understand the performance and status of various sectors of English literature and behavior communication skills in this modern age. • To study the trends and experiments in the literature and spoken languages with the unique performance of every learners and students of the every institutes across the worldTo understand the Read, write and spoken competition in English literature and literature. To understand the concept of all the syllabus concept and conditions of allocative efficiency under perfectly for any competitive fields.
Paper – XVII (b)	
(Indian Literature	Objective:- Extending the comprehensive
in Translation)	overview of the various periods of history of
Elective - B	English literature and sensitize students to the
	aesthetic, cultural and social aspects of
	literature.
	Course Outcomes:-
	• Understand the development of English
	literature through historical timeline.
	• Understand the influence of major religious,
	political and social movements on literature.
	• Develop familiarity with major literary works
	of major English writers.
	Comprehend the defining ethos and
	characteristics of different periods in English
	Literature.
Paper XVIII	Objective:- Provide students an extensive view of
Dissertation and	
Viva-Voce	in the specific time and situation.
	Course Outcomes:-
	After the successful completion of the course, the
	student shall be able to participate all the types
	of programmes and internal evaluations.
	• Study the language and literature of Kumauni and Garhwali region.
	 Develop understanding of the key concepts
	and themes of Regional literature. And
	efficiency development for the students as a
	effective understanding and results.

Subject- Geography

Programme Specific outcomes (PSOS)

Programme outcome (After 3 types of study in BA in Geography)

- 1- This course will provide students, the basic concepts of physical & Human Geography
- 2- It will help in developing analytical and critical thinking based on the themes and issues of Geography.
- 3- Students will be able to analyse the problems of present physical as well as cultural word and they will try to find out the possible measures to solve those problems.
- 4- Students will be able to understand applied and inter disciplinary aspects of Geography.
- 5- Students will be able to design and conduct research projects in Geography.
- 6- Students will be learn how to use various surveying instruments in the field.
- 7- Students will be equipped with various statistical techniques and their uses.
- 8- Students will be able find out an original research question appropriate for geographic analysis.
- 9- Students will be learn how to prepare maps based on toposheets as well as GIS.
- 10-Students will prepare themselves for professional careers in Geography.

List of all papers in six Semester

Semester I Physical geography

Semester I Practical- Basic cartographic Techniques and map Roading

Semester II Human Geography

Semester III Tourism Geography.

Thematic cartography.

Semester IV Regional Planning and Development

Statistical and map projection Techniques

Semester V Geography of india

Economic Geography

Educational Tour

Evolution

Semester VI Geographical thought

Remot Sensing & GIS Techniques

Survey based project

1-2- Geo-Skill -101 - Field Survey

1-2- Geo -Skill -201 - Elements of map Readings

Semester-I

Paper I- Advance Geomorphology
Paper II- Geographical Thought
Paper III- Geography of Natural Resources
Paper IV- Practical – I (Cartography)

Semester-II

Paper V- Environmental Geography
Paper VI- Geography of Himalaya
Paper VII- Word and India Locational Aspects
Paper VIII- Research Methodology & Techniques
Paper- IX- Practical – II, 1- Remote Sensing & GIS
2- Field Study

Semester-III

Paper X- Geography of India

Paper XII (b) - Urban Geography Paper XII (a) - Population Geography Paper XII- Elective: (Student can opt any one of the three papers given Paper XI- Practical- III (Quantitative Techniques and Mapping) below)

Paper XII (c) – Regional Planning Development

Paper XIII -Elective: (Student can opt any of the three papers given below)

Paper XIII (a)- Advanced Climatology

Paper XIII (b) - Natural Hazards and Disaster Management

Paper XIII (c)- Geo- Hydrology

Semester-IV

Paper XVI (c) Remote Sensing and GIS Paper XVI- Elective: (Student can opt any of the three papers given below Paper XVI (b) Cultural Geography Paper XVI (a) Agriculture Geography Paper XIV- Practical – IV (Surveying and Weather analysis) Paper XIV- Geography of Uttarakhand (A Regional Analysis)

Paper XVII- Elective: (Student can opt any one of the three papers given

below)

Paper XVII (a)- Bio Georaphy

Paper XVII (b)- Oceanography
Paper XVII (c)- Geography of Tourism & Recreation
Paper XVIII- Dissertation

(The topic should be selected only from Uttarakhand Himalaya Region)

श्रीदेव सुमन विश्वविद्यालय बादशाहीथौल टिहरी गढ़वाल (उत्तराखण्ड) परास्नातक— हिन्दी डॉ० शिवानन्द नौटियाल रा० स्ना० महाविद्यालय कर्णप्रयाग (चमोली) हिन्दी विभाग

🏲 सम्पूर्ण पाठ्यक्रम चार सत्रार्द्ध में विभाजित है जिनमें प्रथम एवं तृतीय सत्रार्द्ध में चार—चार प्रश्न पत्र है तथा द्वितीय एवं चतुर्थ सत्रार्द्ध में पाँच—पाँच प्रश्न पत्र है जिसमें चतुर्थ सत्रार्द्ध का पाँचवां प्रश्न पत्र मीखिक परीक्षा पर आधारित है।

🕨 प्रत्येक सन्नार्द्ध में प्रश्न पत्र 100 अंक का है जिसमें 80 अंक लिखित परीक्षा एवं 20 अंक आन्तरिक मूल्यांकन परीक्षा के लिए निर्ह्यारित है (लिखित परीक्षा, सत्रीय कार्य

अथवा दोनों)।

🕨 प्रश्नपत्र सम्पूर्ण पाठ्यक्रम को समाहित करता है।

🕨 परीक्षा अवधि कुल 2 घन्टे की निर्धारित रहेंगी।

कार्यक्रम परिणाम (Programme outcome)

हिन्दी

परास्नातक (एम० ए०)

1. साहित्य मानव जीवन एवं समाज से संबंधित जीवनपर्यन्त घटित होने वाले घटनाचकों का एक व्यापक स्त्रोत है। साहित्य समाज को दिशा एवं गति देने का कार्य सजीवता के साथ करता है। विद्यार्थी परास्नातक स्तर पर हिन्दी साहित्य का अध्ययन करके अपनी सांस्कृतिक ऐतिहासिक नैतिक एवं सामाजिक गत्यात्मकता को सरलता से पहचानने में सफल होता है।

2. हिन्दी साहित्य अपने प्रांरिभक काल से भारत के इतिहास में मुस्लिमों के आगमन धर्म, भक्ति के विभिन्न पंथ सूफी, संत, नाथ, सिद्ध, निर्गुण-सगुण, रीतिकाल, श्रृंगाराभिव्यक्ति आदि से लेकर आधुनिक काल की विभिन्न विचारधाराओं और अद्यतन उत्तरआधुनिक

वैचारिक परिदृश्य तक विद्यार्थी इस सुदीर्घ परम्परा का ज्ञान प्राप्त करता है।

3. साहित्य समाज का दर्पण है। जहां दर्पण केवल मानव की वाह्य विकृतियां दिखाता है, वहीं साहित्य मानव की आंतरिक विकृतियां और विशेषताओं को चिन्हित करता है। साहित्य सभी बुराइयों एवं कुरीतियों को दूर करके स्वस्थ,सुंदर और आनन्दमयी जीवन

की सृष्टि करता है।

4. वर्तमान भौतिकवादी जगत में गिरते हुए जीवन मूल्यों से समाज में जो विसंगतियां उत्पन्न हो रही हैं, साहित्य उन विसंगतियों को दूर करके समाज को सही दिशा देने का कार्य करता है। विद्यार्थी परास्नातक स्तर पर हिन्दी साहित्य का अध्ययन कर समुन्नत जीवन मूल्यों को आत्मसात कर अपने भावी जीवन का विकास करता है।

5. विद्यार्थी अपनी लोक संस्कृति, परम्पराओं व सामाजिक मूल्यों से परिचित होते है। प्रौद्योगिकी के दौर में साहित्य ही हमें संवेदनशील बना सकता है। आज के मशीनी युग में साहित्य ही हमारे जीवन में मानवीय संवेदनाओं का प्रचार-प्रसार करता है।

- 6. विद्यार्थी संघ लोक सेवा आयोग तथा राज्य लोक सेवा आयोग की प्रतियोगी परीक्षाओं हेतू विशिष्ट विषय के रूप में हिन्दी साहित्य का ज्ञान प्राप्त करता है।
- 7. विद्यार्थी परास्नातक स्तर पर हिन्दी के अध्ययन से उच्च स्तरीय अनुसंधान के के लिए नवीन विचार एवं परिकल्पनाएं प्राप्त करता है।

विषय परिणाम परास्नातक हिन्दी-प्रथम सत्रार्द्ध प्रथम वर्ष (प्रथम सत्रार्द्ध)

प्रथम प्रश्न पत्र –आरम्भ से रीतिकाल तक

- 1. विद्यार्थी हिन्दी साहित्य के इतिहास से परिचित होने के साथ—साथ हिन्दी में इतिहास लेखन की भारतीय एवं पाश्चात्य परम्परा का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी काल विभाजन की प्रक्रिया तथा स्वरूप से परिचित होकर हिन्दी साहित्येतिहास के विभिन्न इतिहासकारों द्वारा प्रदत्त काल विभाजन का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी आदिकाल की पृष्टभूमि एवं सामान्य प्रवृत्तियों का ज्ञान प्राप्त कर आदिकालीन कविता के नामकरण का भी अध्ययन करता है।
- 4. विद्यार्थी आदिकालीन सिद्ध एवं नाथ साहित्य परम्परा एवं स्वस्प से परिचित होकर आदिकाल के प्रमुख कवि और उनकी रचनाओं का ज्ञान प्राप्त करता है।
- 5. विद्यार्थी आदिकाल की ऐतिहासिक पृष्टभूमि एवं उसकी प्रमुख विशेषताओं से अवगत होता है।
- 6. विद्यार्थी हिन्दी साहित्य के भक्तिकाल की ऐतिहासिक पृष्ठभूमि एवं उसकी प्रमुख काव्यधाराओं एवं प्रवृत्तियों का ज्ञान प्राप्त करता है।

द्वितीय प्रश्न पत्र आदिकालीन एंव निर्गुण काव्य

- 1. विद्यार्थी आदिकाल के प्रसिद्ध महाकाव्य 'पृथ्वीराजरासो' के अध्ययन से वीरगाथा काव्य परम्परा के उत्कर्ष रूप से परिचित होता हैं।
- 2. विद्यार्थी विद्यापति के पदो के अध्ययन से हिन्दी की गीतिकाव्य परम्परा और उनकी भक्तिभावना से परिचित होता है।
- 3. विद्यार्थी 'कबीर वाणी' कर अध्ययन करके कबीर के काव्य सौष्ठव एवं निर्गुण काव्यधारा की सन्त शाखा से परिचित होता है।
- 4. विद्यार्थी रहीम ग्रन्थावली एवं रैदास ग्रथावली का अध्ययन करता है।
- 5. विद्यार्थी जायसी के महाकव्य 'पद्मावत' के अन्तर्गत नागमती वियोग वर्णन काव्य का अध्ययन करके भक्तिकाव्य में सूफी काव्यधारा का ऐतिहासिक सैद्धान्तिक और उनकी सौन्दर्य–दृष्टि का ज्ञान प्राप्त करता हैं।

तृतीय प्रश्न पत्र

''मध्यकालीन सगुण एवं रीतिकालीन काव्य''

- 1. विद्यार्थी सगुण काव्यधारा एवं रीतिकालीन काव्यधारा का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी सूरदास एवं तुलसीदास की रचनाओं का अध्ययन करके कृष्ण काव्यधारा एवं राम काव्यधारा की प्रमुख प्रवृतियां की जानकारी प्राप्त करता है।
- 3. विद्यार्थी केशवदास के काव्य के अध्ययन से भारतीय काव्यशास्त्र की परम्परा का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी बिहारी के काव्य के अध्ययन से रीतिकाल की रीतिसिद्ध काव्य परम्परा और उनकी काव्यगत विशेषताओं से परिचित होता है।
- 5. विद्यार्थी घनानन्द काव्य के अध्ययन से घनानन्द के काव्य सौष्ठव के साथ—साथ रीतिमुक्ति काव्य परम्परा का ज्ञान प्राप्त करता है।

चतुर्थ प्रश्न पत्र हिन्दी साहित्य का इतिहास (भारतेन्दु युग से अब तक)

- 1. विद्यार्थी हिन्दी साहित्य के आधुनिककाल की ऐतिहासिक पृष्ठभूमि का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी आधुनिककाल के अंतर्गत साहित्य के विभिन्न आंदोलनों यथा—छायावाद, प्रगतिवाद ,प्रयोगवाद द्वारा समय —समय पर हिन्दी कविता के परिवर्वितस्वरूपों से परिचित होता हैं साथ ही विषयगत एवं संरचनागत परिवर्तनों का भी ज्ञान प्राप्त करता है।
- 3. विद्यार्थी आधुनिक कालीन विभिन्न कवियों व उनकी रचनाओं से अवगत होता है।
- 4. विद्यार्थी हिन्दी साहित्य के आधुनिक काल के अंतर्गत गद्य साहित्य के विकास की पृष्ठभूमि एवं विभिन्न गद्य विधाओं यथा—कहानी, नाटक ,उपन्यास,निबन्ध आदि का ऐतिहासिक परिचय एवं ज्ञान प्राप्त करता है।
- 5. विद्यार्थी हिन्दी साहित्य के आधुनिककाल के अंतर्गत स्मारक—साहित्य और उसकी विभिन्न विधाओं यथा—संस्मरण, रेखाचित्र जीवनी, नाटक एकांकी उपन्यास कहानी इत्यादियों का अध्ययन करता है।

प्रथम वर्ष (द्वितीय सत्रार्द्ध)

पांचवा प्रश्न पत्र

''भारतीय काव्यशास्त्र एवं हिन्दी आलोचना''

- 1. विद्यार्थी काव्यशास्त्र सम्बन्धी प्रचलित भारतीय अवधारणाओं / मतों से परिचित होता है।
- 2. विद्यार्थी काव्य लक्षणों, काव्य हेतु काव्य प्रयोजन एवं काव्य भेदों का आधारभूत ज्ञान प्राप्त करता है।
- 3. विद्यार्थी हिन्दी साहित्य में प्रचलित विभिन्न काव्य सम्प्रदायों एवं उनकी मान्यताओं से अवगत होता है।

- 4. विद्यार्थी हिन्दी आलोचना से संबन्धित विभिन्न प्रतिमानों एवं सिद्धान्तों का ज्ञान प्राप्त कर प्रमुख आलोचकों एवं उनके कार्य का साक्षात्कार करता है।
 - 6. विद्यार्थी आलोचना के प्रमुख आलोचकों के प्रमुख तत्वों तथा आलोचना से समालोचना तक की यात्रा से परिचित होता है।

छठवां प्रश्न पत्र आधुनिक गद्य,(निबंध नाटक एवं अन्य गद्य विधाएं)

- 1. विद्यार्थी नाटक विधा के उद्भव और विकास का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी नाटक के स्वरूप और प्रकारों का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी पाठ्यक्रम में सम्मिलित नाटक के आधार पर नाटक की समीक्षा का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी हिंदी निबंध के विभिन्न तत्वों एवं प्रकारों का ज्ञान प्राप्त करता है।
- 5. विद्यार्थी हिंदी निबंध की विभिन्न शैलियों से परिचित होता है।
- 6. विद्यार्थी पाठ्यक्रम में संकलित निबंधकारों के निबंध- कला से परिचित होता है।

सातवां प्रश्न पत्र– ''उपन्यास एवं कथा साहित्य''

- 1. विद्यार्थी उपन्यास और कथा साहित्य के उद्भव एवं विकास यात्रा से परिचित होता है।
- 2. विद्यार्थी उपन्यास और कथा साहित्य के विभिन्न तत्वों और प्रकारों का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी गोदान उपन्यास के अध्ययन से तत्कालीन सामाजिक जीवन की विषमताओं, भारतीय कृषक की दयनीय स्थिति के लिए उत्तरदाई सामाजिक शोषकों द्वारा किए गए अत्याचारों से परिचित होता है।
- 4. विद्यार्थी पाठ्यक्रम में सम्मिलित कहानियों के अध्ययन से हिंदी कहानी की विकास यात्रा एवं कहानी शिल्प का ज्ञान प्राप्त करता है।

आठवां प्रश्न पत्र ''पाश्चात्य काव्यशास्त्र''

- विद्यार्थी पाश्चात्य काव्य शास्त्र सम्बन्धी विभिन्न अवधारणाओं एवं मतों से परिचित होता है।
- 2. विद्यार्थी प्लेटो की काव्य विषयक मान्यताओं का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी अरस्तू की त्रासदी विषयक अवधारणा, अनुकरण एवं विरेचन सिद्धान्त का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी मैथ्यू आर्नन्ड के कला और नैतिकता के सिद्धान्त तथा क्रोंचे के अभिव्यंजनावादी सिद्धान्त से परिचित होता है।
- 5. विद्यार्थी आई० ए० रिचर्ड्सन० के संप्रेषणीयता के सिद्धांत एवं टी० एस० इलियट के कला की निवैयक्तिकता के सिद्धान्त से परिचित होता है।

6. विद्यार्थी अंग्रेजी के कवि वर्ड्सवर्थ के काव्य भाषा के सिद्धान्त और कॉलरिज के कल्पना के सिद्धान्त का परिचय प्राप्त करता है।

7. विद्यार्थी पश्चिमी साहित्य और संस्कृति की महत्वपूर्ण विचारधाराओं—स्वच्छंदतावाद, मनोविश्लेणवाद, अस्वित्ववाद, संरचनावाद, उत्तर आधुनिकतावाद का परिचय और ज्ञान प्राप्त करता है।

नवम् प्रष्न पत्र आधुनिककाव्य (भारतेन्दू युगसेउत्तरछायावाद तक)

1. विद्यार्थी आधुनिक हिन्दी कविता के प्रारम्भिक स्वरूप का ज्ञान प्राप्त करता है।

2. विद्यार्थी रत्नाकर के काव्य के अध्ययन से भिक्तकाल की कृष्णभिक्त शाखा के स्वरूप एवं रत्नाकर के काव्य सौष्ठव से परिचित होता है।

3. विद्यार्थी नवजागरण काल में खड़ीबोली हिन्दी में काव्य रचना के प्रयोग से परिचित होता है।

4. विद्यार्थी गुप्त कृत 'साकेत' के अध्ययन से रामकथा में उपेक्षित नारी पात्र उर्मिला से परिचित होता हैं साथ ही वह स्त्री के संघर्षी, त्याग और बिलदानों से परिचित होता है।

5. विद्यार्थी पाठ्यकम में संकलित कवियों जयशंकर प्रसाद, सूर्यकान्त त्रिपाठी निराला, सुमित्रा नन्दन पन्त एवं महादेवी वर्मा की कविता ओं के अध्ययन से छायावादी काव्यगत प्रवृतियों से अवगत होता है।

दसवां प्रश्न पत्र। भाषा विज्ञान एवं हिंदी भाषा।

- 1. विद्यार्थी भाषा विज्ञान के अध्ययन से भाषा विज्ञान के अर्थ, स्वरूप,भाषा— व्यवस्था के महत्व एवं परिचय का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी भाषा विज्ञान की प्रमुख शाखाओं स्वन , स्वनिम, रूप, रूपिम, वाक्य, अर्थ आदि का सैद्धांतिक ज्ञान प्राप्त करता है।
- 3. विद्यार्थी भाषा की विशेषताओं और भाषा विज्ञान के क्षेत्र का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी भाषा विज्ञान के अध्ययन से साहित्य में भाषा विज्ञान की उपयोगिता का ज्ञान प्राप्त करता है।

ग्यारहवां प्रश्न पत्र।

आधुनिक काव्य(छायावादोत्तर हिंदी कविता)।

- 1. पाठ्यक्रम में संकलित प्रगतिवाद, प्रयोगवाद और नई कविता के अध्ययन से विद्यार्थी तत्कालीन हिंदी कविता के शिल्पगत सौंदर्य और उसके स्वरूप से परिचित होता है।
- 2. विद्यार्थी प्रगतिवादी कविता की ऐतिहासिक पृष्टभूमि एवं युगीन प्रवृत्तियों का परिचय प्राप्त करता है।
- 3. विद्यार्थी नई कविता के स्वरूप एवं प्रवृत्तियों से परिचित होता है।
- 4. विद्यार्थी पाठ्यक्रम में संकलित कविताओं के अध्ययन से छायावादोत्तर— कविता के भावगत एवं शिल्पगत सौंदर्य का ज्ञान प्राप्त करता है।

बारहवां प्रश्न पत्र (वैकल्पिक)

"जयशंकर प्रसाद"

1. विद्यार्थी जयशंकर प्रसाद के व्यक्तित्व एवं कृतित्व से परिचित होते हैं।

- 2. विद्यार्थी जयशंकर प्रसाद के ऐतिहासिक नाटक, निबंध, उपन्यास एवं कथा साहित्य की परंपरा से परिचित होते हैं ।
- 3. विद्यार्थी प्रसाद जी के विविध काव्य संग्रह से परिचित होते हैं।

4. विद्यार्थी प्रसाद जी के प्रसिद्ध महाकाव्य कामायनी का अध्ययन करते हैं।

5. विद्यार्थी प्रसाद जी के ऐतिहासिक नाटकों का वर्तमान परिपेक्ष्य में प्रासंगिकता के रूप में अध्ययन करते हैं।

तेरहवां प्रश्न पत्र (विकल्प) ''सूरदास''

1. विद्यार्थी हिन्दी साहित्य के भक्ति काल का ऐतिहासिक परिचय व ज्ञान प्राप्त करता है

2. विद्यार्थी भक्तिकालीन संगुण काव्यधारा की कृष्णाश्रयी शाखा का परिचय एवं ज्ञान प्राप्त करता है।

3. विद्यार्थी पाठ्यकम में संकलित सूरदास के पदों के अध्ययन से सूर के वात्सल्य वर्णन

से परिचित होता है।

4. विद्यार्थी सूर के पदों के अध्ययन से सूर की श्रृंगारिकता एवं भक्ति भावना का परिचय एवं ज्ञान प्राप्त करता है।

5. विद्यार्थी सूरदास के पदों के अध्ययन से पुष्टिमार्ग की मूल भूत अवधारणा से अवगत होता है।

चौदहवां प्रश्न पत्र भाषा विज्ञान और हिंदी भाषा

- विद्यार्थी हिंदी की ऐतिहासिक पृष्ठभूमि के अंतर्गत प्राचीन भारतीय आर्य भाषाओं यथा—वैदिक संस्कृत और लौकिक संस्कृत का अध्ययन करते हैं।
- 2. विद्यार्थी मध्यकालीन भारतीय आर्य भाषा यथा— पालि, प्राकृत, अपभ्रंश और उनकी विशेषताओं से परिचित होते हैं।
- 3. विद्यार्थी, हिंदी की प्रमुख उपभाषाएं एवं बोलियों से परिचित होते हैं।
- 4. विद्यार्थी हिंदी वाक्य रचना, पदक्रम, अन्विति का ज्ञान प्राप्त करके लिंग वचन कारक व्यवस्था से परिचित होते हैं।

पन्द्रहवां प्रश्न पत्र प्रयोजनमूलक हिंदी और मीडिया लेखन।

- 1. विद्यार्थी हिंदी भाषा के प्रयोजनमूलक स्वरूप का आधारभूत ज्ञान प्राप्त करता है।
- 2. विद्यार्थी पत्राचार के स्वरूप, पत्राचार के प्रकार एवं महत्व से परिचित होता है।
- 3. विद्यार्थी पत्राचार के प्रकार यथा— सरकारी, अर्द्ध—सरकारी पत्र, ज्ञापन, परिपत्र, आदेश, पृष्ठांकन, टिप्पणी, प्रारूपण, प्रतिवेदन, विज्ञप्ति के ज्ञान से परिचित होता है।

- 4. विद्यार्थी हिंदी के पारिभाषिक शब्दावली से परिचित होता है।
- 5. विद्यार्थी मीडिया लेखन के महत्व से परिचित होता है।
- 6. विद्यार्थी भाषा की कंम्प्यूटिंग,टाइपिंग, फांण्ट प्रबंधन, डाटा प्रोसेसिंग और वर्ल्ड प्रोसेसिंग का ज्ञान प्राप्त करता है।
- 7. विद्यार्थी मीडिया, रेडियो,टीवी, इंटरनेट आदि के क्षेत्र में लेखन और संपादन संबंधी ज्ञान प्राप्त करता है।

सौलहवां प्रश्न पत्र गढवाली लोक साहित्य।

- 1. विद्यार्थी साहित्य के मौखिक अलिखित स्वरूप (लोक पक्ष) की मूलभूत जानकारी प्राप्त करता है साथ ही लोक साहित्य के विभिन्न तत्वों से परिचित होता है।
- 2. विद्यार्थी गढ़वाली लोक साहित्य के स्वरूप से परिचित होता है ।
- 3. विद्यार्थी लोक साहित्य के विविध आयामों, अध्ययन की विविध प्रविधियों, संकलन— प्रक्रिया आदि का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी लोक संस्कृति के अंतर्गत लोक गीत, लोकनाट्य, लोककथा, और लोकगाथा से संबद्ध विभिन्न प्रचलित —अप्रचलित स्वरूपों, उनकी विशिष्टताओं एवं मूलभूत अंतर से परिचित होकर उनके प्रति जागरूकता एवं अभिरुचि उत्पन्न करता है।
- 5. विद्यार्थी लोक-साहित्य एवं लोक- संस्कृति के संरक्षण हेतु प्रयासरत होते हैं।

सन्नहवां प्रश्न पन्न (वैकल्पिक) जनपदीय भाषा साहित्य (गढ़वाली भाषा साहित्य).

- 1. विद्यार्थी गढ़वाली भाषा साहित्य के स्वरूप का अध्ययन करता है।
- 2. विद्यार्थी गढ़वाली भाषा साहित्य के प्रमुख रचनाकारों के व्यक्तित्व एवं कृतित्व से परिचित होता है।
- 3. विद्यार्थी गढ़वाली भाषा साहित्य का उद्भव एवं विकास से परिचित होता है।
- 4. विद्यार्थी पाठ्यक्रम में संकलित सदई गीत, बुरास की पीड़,ब्वै की चिट्ठी इत्यादि कविताओं का अध्ययन करता है।
- 5. विद्यार्थी गढ़वाली भाषा के साहित्यिक प्रवृत्तियों का अध्ययन करता है।

अठ्ठारहवां प्रश्न पत्र मीखिकी

- 1. विद्यार्थी समस्त पाठ्यकम का पुनरावलोकन करता है।
- 2. विद्यार्थी पुस्तकों द्वारा प्राप्त ज्ञान को व्यावहारिक रूप में अभिव्यक्त करने का प्रशिक्षण प्राप्त करता है।
- 3. विद्यार्थी विषय का अध्ययन करते हुए आत्मसात किए गए ज्ञान की अभिव्यक्ति का अवसर प्राप्त करता है।

श्रीदेव सुमन विश्वविद्यालय बादशाहीथौल टिहरी (गढ़वाल) वर्ष 2018–19 स्नातक हिंदी

डॉ० शिवानंद नौटियाल राजकीय स्नातकोत्तर महाविद्यालय कर्णप्रयाग (चमोली)

- संपूर्ण पाठ्यक्रम वार्षिक पद्धित पर आधारित है, जिसमें प्रत्येक वर्ष दो—दो प्रश्न पत्र है।
- 🕨 प्रत्येक प्रश्न पत्र 100 अंक का निर्धारित है।
- 🕨 प्रश्न पत्र संपूर्ण पाठ्यक्रम को समाहित करता है।
- परीक्षा अवधि 3 घंटे की निर्धारित की गई है।

कार्यक्रम परिणाम(programme outcome)

स्नातक पाठ्यक्रम बी० ए०

हिन्दी भाषा आधार पाठ्यक्रम के रूप में हिन्दी भाषा के अध्ययन से विद्यार्थी हिन्दी भाषा के व्यावहारिक पक्ष में विशेषज्ञता प्राप्त करता है।

आधार पाठ्यक्रम के रूप में हिंदी भाषा के अध्ययन से विद्यार्थी हिंदी भाषा की संवैधानिक स्थिति जैसे राष्ट्रभाषा और राजभाषा संबंधी पक्ष में विशेषज्ञता प्राप्त करता है।

आधार पाठ्यक्रम में हिन्दी भाषा के अध्ययन से विद्यार्थी संपर्क भाषा संबंधी पक्ष में विशेषज्ञता प्राप्त करता हैं।

आधार पाठ्यक्रम में हिन्दी भाषा के अध्ययन से विद्यार्थी हिन्दी के कार्यालय व्यवहार व प्रयोग में विशेषज्ञता प्राप्त करता हैं।

संघ लोक सेवा आयोग एवं प्रादेशिक लोक सेवा आयोग की परीक्षा पाठ्यक्रम में सिम्मिलित हिन्दी भाषा की आधारभूत व अनिवार्य शिक्षा प्राप्त करता है।

विषय परिणाम (Course outcomes)

स्नातक प्रथम वर्ष

हिंदी

प्रथम प्रश्न पत्र

"हिंदी भाषा एवं साहित्य"

1. राष्ट्रभाषा व संपर्क भाषा का ज्ञान होने से संपर्क भाषा के रूप में हिंदी का प्रयोग

2. विद्यार्थी हिंदी की बोलियों का ज्ञान प्राप्त करता है, जिससे वह अपने भाषा संस्कारों को

3. भाषा को संपर्क भाषा का ज्ञान होने से संपर्क भाषा के रूप में हिंदी का प्रयोग अधिक कुशलता से कर सकता है।

4. विद्यार्थी हिंदी गद्य की विविध विधाओं से परिचित होता है।

5. विद्यार्थी देवनागरी लिपि से परिचित होता है

द्वितीय प्रश्न पत्र

काव्यागं एवं हिंदी कविता (आदिकाल से रीतिकाल)

- 1. विद्यार्थी काव्यांग के अंतर्गत छंद के स्वरूप एवं प्रकारों का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी काव्यांग के अंतर्गत रस के स्वरूप एवं प्रकार का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी काव्यांग के अंतर्गत छंद के स्वरूप एवं प्रकारों का ज्ञान प्राप्त करते हैं
- 4. विद्यार्थी पाठ्यक्रम में संकलित कवि चंदबरदाई, अमीर खुसरो, सूरदास, तुलसीदास, बिहारी, भूषण के व्यक्तित्व एवं कृतित्व और उनकी शिल्पगत विशेषताओं से परिचित होता है

द्वितीय वर्ष प्रथम प्रश्न पत्र "गद्य एवं नाट्य साहित्य"

- 1 शिक्षार्थी हिंदी की कथा परंपरा से परिचित होता है।
- 2. विद्यार्थी हिंदी कहानी के उद्भव और विकास का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी पाठ्यक्रम में संकलित एकांकियों के आधार पर एकांकी की समीक्षा का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी पाठ्यक्रम में सम्मिलित नाटक के आधार पर नाटक की समीक्षा का ज्ञान प्राप्त करता है।
- 5. विद्यार्थी हिंदी गद्य साहित्य की विविध विधाएं यथा-रेखाचित्र, संस्मरण, यात्रा वृतांत, डायरी, एकांकी, आत्मकथा, जीवनी इत्यादि का ज्ञान प्राप्त करता है।

द्वितीय प्रश्न पत्र

''आधुनिक हिंदी कविता''

- 1. विद्यार्थी आधुनिक हिंदी कविता के प्रवृतिगत इतिहास का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी ,पाठ्यक्रम में संकलित छायावादी कविताओं के अध्ययन से तत्कालीन हिंदीं कविता के स्वरूप और उसके शिल्पगत सौंदर्य से परिचित होता है।
- 3. विद्यार्थी आधुनिक हिंदी कविता के प्रारंभिक स्वरूप का ज्ञान प्राप्त करता है।
- 4. विद्यार्थी पाठ्यक्रम में संकलित कवियों जयशंकर प्रसाद, सूर्यकांत त्रिपाठी निसला, सुमित्रानंदन पंत, चंद्र कुंवर बर्त्वाल, सुभद्रा कुमारी चौहान, सिच्चदानंद, हीरानंद वात्सायन अज्ञेय की कविताओं के अध्ययन से छायावादी एवं प्रयोगवादी काव्यगत प्रवृत्तियों से अवगत होता है।

तृतीय वर्ष प्रथम प्रश्न पत्र ''प्रयोजनमूलक हिंदी''

- 1. विद्यार्थी हिंदी भाषा के प्रयोजनमूलक स्वरूप का आधारभूत ज्ञान प्राप्त करता है।
- 2. विद्यार्थी पत्राचार का ज्ञान प्राप्त कर कार्यालयी एवं व्यवसायिक पत्र लेखन का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी प्रारूपण और टिप्पण का ज्ञान प्राप्त करता हैं।
- 4. विद्यार्थी संक्षेपण और पल्लवन के नियमों और उनके मध्य मूलभूत अंतर से परिचित होता है।

द्वितीय प्रश्न <mark>पत्र</mark> ''जनपदीय भाषा साहित्य''

- 1. विद्यार्थी कुमाऊनी और गढ़वाली साहित्य के उद्भव एवं विकास का ज्ञान प्राप्त करता है।
- 2. विद्यार्थी पाठ्यक्रम में संकलित सदेई गीत, प्रेमी पथिक काव्य का भावगत एवं शिल्पगतगत सौंदर्य का ज्ञान प्राप्त करता है।
- 3. विद्यार्थी लोक साहित्य के विविध रूपों एवं उनकी विशेषताओं से परिचित होता हैं।
- 4. विद्यार्थी लोक साहित्य और लोक संस्कृति के अध्ययन से लोक परंपरा के अर्थ, स्वरूप और महत्व का ज्ञान प्राप्त करता है।

M.sc 1sem physics
Paper -Classical physics
Course outcomes
In this course students would learn to apply the Newtonian
laws using various mathematical formulations to describe the motion
Of macroscopic object using generalized coordinates.
Momentum Forces and energy. The classical mechanics would be helpful in understanding of advanced branches of modern physics

Course Title -Mathematical physics

Course outcomes

Students would be able to understand the mathematical methods essential for solving the advanced problems in physics.it would be helpful in the development of the ability to apply the mathematical concepts and techniques to solve the problems in theoretical and experimental physics. The knowledge of mathematical physics would be beneficial in Further research and development as it serves as a tool in almost every branch of science and engineering.

Paper - Electrodynamic

Course outcomes

The study of Electrodynamic provides basic foundation for the students to understand advance courses of physics. The course includes basic equiof Electromagnetic Electrostatic Magneto statistics Maxwell's equation. Four vector potential electromagnetic field sensor and Quantization of electromagnetic energy.

M.sc 3sem

Paper -Advanced Quantum mechanics

Course outcomes

The course includes the study of scattering theory identical particles relativistic wave equation and Quantization of wave field. The course would describe the nature and behaviour of matter and energy at sub atomic. In particular theroryof scattering gives an understanding collision between a quantum mechanical particle and target.

Paper.

Course Title-Mechanics B.sc 1sem

Course outcomes

1-understanding of vector Algebra and vector calculus

2-understand the physical interpretation of gradient divergence and curl.

3-study of gravitinal field and potential and understanding Kepler's laws of planetary motion

4-understanding of different frames of references and conservation laws

5-understanding the dynamic of rigid body and concepts of moment of inertia

6-study the properties of matter and their elastic Dey and it's application

7-comprehed the dynamics of fluid and concept of viscosity and surface tension.

B.sc 2year

Paper -Thermodynamics

Course outcomes

1-Recognize difference between reversible and Irreversible process

2-understanding First and and second laws of thermodynamics and concept of Entropy.

3-understanding physical significance of Thermodynamics potential and concept of Maxwell's thermodynamics relation

4-comprehend the kinetic therory of gases.

5-study the implementation and limitations of fundamental radiation law.

Paper -optices

Course outcomes

1-study of Fermat's principle of extremum path and understand fundamental physics behind reflection and refraction of light.

2-understand the theory of image formation by and optical system.

3-study of different types of optical Aberration and techniques for their reduction

4-study of different types of optical instrument used in industry and research

5-understand Diffraction of Light and concept of zone plate

6-understand the polarization of light

Dr.ShivanandNautiyal Govt. PG College Karnprayag Chamoli Uttarakhand Programme Outcomes Report of Economics

Name of Department : Economics B.A. in Economic

Economics subject enables the learners to build up a professional career as economists, financial advisors, economics planners and policy makers. It prepares them to cope up with the stress and strain involved in the process of economic development. Department Supports the education and training of students, teachers, consumption, distribution and etc are organized by the markets. and research in economics. They will be encouraged to analyze the basic economics ideas in practice and will also be able to learn how economics activities like production

	I	B.A I Year
Course no	Name of Paper	Programme Outcomes
UG/ECO(C)/1 01	1. Micro Economics	Objective of the Paper: The course objective is to make a student learn basic principles of Micro Economics which will help him/her to utilise them for understanding the economic behaviour of individual agents (Consumers and Producers) and firms. Programme Learning Outcome: • Learn the basic concepts of Economics along with the fundamentals and framework of Micro Economics. • Analysis of the functioning of the micro economy. • Study of micro economics enables the students to have an understanding of theoretical aspects of the subject. • Students are able to understand and define the basic concepts like consumer behaviour, production, demand and supply etc. • To understand the individual consumer, producer, firm economic behaviour along with their equilibrium conditions. • To learn the status of cost and revenue of firm in the short and long run. • To understand the firm's behaviour under perfect market competition. • To understand the concept and conditions of allocative efficiency under perfectly competitive markets.
	2. Economics,	Course Objective:
	Structure and	This course will give the students a thorough
	problems of Indian	grounding in the most important contemporary issues
	Economy	of the Indian economy. The major aim of the course is
	-	to deliversector-specific knowledge andunderstanding

of related macroeconomic concepts and issues related
to Indian Economy.
Programme Learning Outcome:
 Acquire an understanding about the basic characteristics of the Indian economy, the structural composition of its national income graspthe necessity and importance of the fiscal, trade, investment, financial policies undertaken in the post-independent period be able to explain the reasons of inflation in the Indian economy as agriculture – growth, productivity. Understand the performance and status of various sectors of Indian Economy To study the trends of performance of agriculture, industrial sector and foreign trade Understand and evaluate Indian government policies related to agriculture, industrial sector
and foreign trade.

B.A II Year		
Name of Paper	Programme Outcomes	
1. Macro Economics	Objective of the Paper: The aim of the course is to acquaint the students with Macro Economic theory and concepts which will help them to understand the real-world economic situations and changes and to understand the basic concepts in macroeconomics. Some of these concepts are as follows: National Income Accounting, balance of payments accounts, current and capital accounts. Programme Learning Outcome: • Understand major Macro Economic issues along with meaning and importance of Macro Economics • Learn National Income accounting along with understanding the different concepts of national income and its measurement methods. • Understand the concept of actual and potential GDP along with learning Consumption function and working of multiplier • Learn the objectives and tools of Fiscal policy along with impact of changes in fiscal policy • Learn functions of money along with understanding the quantity theory of money and process of credit creation • Learn the objectives and instruments of Monetary policy • Derive IS and LM curves and to understand	
	Name of Paper	

T		
		and money market
		Understand the concepts of aggregate demand
		and aggregate supply
		• Study aggregate supply in short and long run
		• Learn the concept of inflation and to know
		the existence of Philips curve and its further
		collapse leading to the situation of stagflation.
2. Econom	ic Theory	Objective of the Paper:
	-	The course main objective is to get learner familiarise
Money Bar	nking and	with main issues of government finances, its financial
Internation		functions and issues related to it, with reference to
Economics	s 1	Indian economy.The objective of the course is to help
	1	the learner understand the theory and functioning of
	1	the monetary and financial sectors of the economy
	;	along with domain and tools of monetary policy.
	1	Programme Learning Outcome:
		Analyse the fiscal functions of the government
		and to make learner familiarise with taxes and
		main issues in government expenditure.
		Understand the sources of finance both public
		and private, demonstrate the role of government
		to correct market failures and possible advantage
		of public financing
		Learn the working of both monetary and fiscal
		policies.
		The students get enabled to know Public
		Expenditure, Public Revenue and Public Debt
		Critically analyse the issues in present Indian tax
		system.
		Learn various concepts of budget and deficits
		Understand the concept of money and
		determination of money supply.
		Learn the role of central bank along with
		working of monetary policy.
		norking of monetary policy.

B.A III Year		
Course no	Name of Paper	Programme Outcomes
UG/ECO(C)/3		Objective of the Paper:
01		This course aims to train students in basic statistics.
	1. Basic Quantitative	Knowledge about preliminary mathematical
	Methods for Economics,	concepts.
		Programme Learning Outcome
		 Express relationship between economic variables mathematically, analyses, optimize and interpret them.
		 Use appropriate techniques to solve problems with calculus and linear algebra. To train the students to use the techniques of

- probability theory and statistical analysis, which are commonly applied to understand and analyses economic problem.
- To deals with simple tools and techniques, which will help in sampling theory and designs, data collection, analysis, theory of estimation and hypothesis testing.
- To initiates the correlation analysis simple, multiple and partial, and regression analysis linear and non-line

2. Economic Development and Planning

Objective of the Paper:

The main objective of this paper to introduce basic demographic concepts and their evolution during the process of development and analyses Land, Labour and Credit Markets to reflect on role of globalization, sustainable development and increased international dependence on the process of development.

Programme Learning Outcome:

- It will enable them to understand the evolution of the measures of development.
- It will acquaint them with the latest theories of economic development.
- It will provide them with an understanding of how development is financed through domestically mobilized resources.
- Understanding about how the question of the ability to be knowledgeable becomes prominent when we inquire about the prosperity of a nation or a region of the world.
- Getting acquainted with the economics of education. Familiarity with the concept of human capital and
- modalities associated with the Human Capital Project of the World Bank Group.

Programme Outcomes M.A. in Economic

The Master of Arts programme in Economics has been designed with the objective to develop in-depth knowledge of students in frontier areas of economic theory and methods, so that they are able to use the knowledge to study real world economic problems. The course has a strong focus on theoretical and quantitative skills and train students in the collection and analysis of the data using their software skills. The programme offers specialised optional courses, which allow student to pursue their studies in their area of interest. Department Supports the education and training of students, teachers and research in economics. They will be encouraged to analysis the basic economics ideas in practice and will also be able to learn how economics activities like production, consumption, distribution and etc are organized by the markets.

The students are required to submit report and present their findings of field-study. Besides, to hone the student's writing and analytical skills they are required to submit a term paper on current economic problem. Thus, the Masters in Economics programme seek to:

	M.A Economics) SEMESTER - I		
Course no	Name of Course	Programme Outcomes	
PG/ECO(C)/1 01	Micro Economics-I	Course Objectives: This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyses real-life situations. Programme Learning Outcomes: Study of micro economics enables the students to have an understanding of theoretical aspects of the subject. Students are able to understand and define the basic concepts like consumer behaviour, production, demand and supply etc. Students will learn about the price and output determination of the firm and industry under different market forms. They also learn about the Welfare concept in modern Economics. Students are able to understand and define the basic concepts like consumer behaviour, production, demand and supply etc. To understand the individual consumer, producer, firm economic behaviour along with their equilibrium conditions. To learn the status of cost and revenue of firm in the short and long run.	
PG/ECO(C)/1	International	Course Objective:	
02	Economics Economics	The purpose of this course is to inform the basics of international trade theory and to examine the effects of international economic policies on domestic and world	

welfare. The course aims to introduce students to the main theoretical and empirical concepts in international trade and familiarise them with the main issues in trade policy and the basic features of the international trading regime. **Programme Learning Outcomes:** 1. Demonstrate familiarity with the terminology adopted in international economics. 2. Analyze and explain the implications of data (pattern of trade, terms of trade, gains from trade): 3. Reflect on trade policy instruments and analyses their effects on nations' welfare; 4. Demonstrate the ability to think critically and objectively by relating current issues in international economics to the material learned in class. At the end of the course, the students should be able to demonstrate their understanding of the economic concepts of trade theory. In some models, the student will be required to deal with simple algebraic problems that will help them to better understand these concepts, use diagrammatic analysis to demonstrate and compare the economic welfare effects of free trade and protection, demonstrate their understanding of the usefulness and problems related to topics in international trade, and demonstrate their critical understanding of trade policies PG/ECO(C)/1 **Ouantitative Objectives:** 03 Methods and This course aims to train students in basic statistics. **Statistical Course** Knowledge about preliminary mathematical concepts specially related to real valued, Concave, quasi techniques concave and continuous function to train the students to use the techniques of probability theory and statistical analysis, which are commonly applied to understand and analyze economic problems. 2. To deals with simple tools and techniques, which will help in sampling theory and designs, data collection, analysis, theory of estimation and hypothesis testing 3. To initiates the correlation analysis - simple, multiple and partial, and regression analysis - linear and nonlinear. .To train the students to use the techniques of mathematical and statistical analysis, which are commonly and analyze applied to understand economic problems **Programme Learning Outcomes:** 1. Students will be able to analyse data statistically. 2. To be able to identify features that describe a data distribution 3. Various analytical skills of students will be sharpened. 4. Students will develop an analytical approach with deeper understanding of every concept taught. To understand the Basic concept of Mathematical Economics. To use the mathematical tools and methods

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M.A (Economics) SEMESTER - II		
Course no	Name of Course	Programme Outcomes
PG/ECO(C)/2	Micro Economics-II	Course Objective:
01		The objective of the course is to introduce the student
		with advanced modern Microeconomic theory.
		Course Learning Outcomes:
		After the completion of the course, students will
		be able to address economic issues related to
		uncertainty and risk in decision-making. The students
		will learn to understand how in the real world market
		contractual settings are characterized by conflict of

	1	:
		interests as well as asymmetry of information among
		the individuals involved. Also, the students will
		develop an understanding of how negotiations made
		under asymmetric information conditions and how the
		sub-optimality problem can be addressed in
		economics.
PG/ECO(C)/2	Macro Economics	Course Objectives:
02		This is the first module in a three-module sequence
		that introduces students to the basic concepts of
		Macroeconomics. Macroeconomics deals with the
		aggregate economy. This course discusses the
		preliminary concepts associated with the
		determination and measurement of aggregate
		macroeconomic variable like GDP, savings,
		investment, money, inflation, and the balance of
		payments. It also introduces students to simple
		analytical frameworks (e.g., the ISLM model) for
		determination of equilibrium output.
		Course Learning Outcomes:
		1. This course aims to develop the broad conceptual
		frameworks which will enable students to
		understand and comment upon real economic
		issues like inflation, money supply, GDP and their
		interlinkages.
		2. It will also allow them to critically evaluate
		various macroeconomic policies in terms of a
		coherent logical structure.
		3. This course will enable the students to combine
		their knowledge of the working of macroeconomy
		with long run economic phenomena like economic
		growth, technological progress, R&D and
		innovation.
		4. It will also enable students to understand business
		cycles and the concomitant role of policies.
PG/ECO(C)/2	Economics of Growth	Course Objective:
` '		9
03	and Development	This is the first part of a two-part course on economic
		development. The course begins with a discussion of
		alternative conceptions of development and their
		justification. It then proceeds to aggregate models of
		growth and cross-national comparisons of the growth
		experience that can help evaluate these models. The
		axiomatic basis for inequality measurement is used to
		develop measures of inequality and connections
		between growth and inequality are explored.
		Learning Outcomes:
		1. This course introduces students to the basics of
		development economics, with in-depth
		discussions of the concepts of development,
		growth, poverty, inequality, as well as the
		underlying political institutions.
		2. The students will be able to understand the
		development theories along with the conceptual
		issues in growth and development.
		3. The students will be able to understand the
•	•	

	concept of demographical development of India,
	its demographic features and HDI. This course teaches the student various aspects of the Indian economy, as well as important themes relating to the environment and sustainable development. It also introduces them to some issues of globalisation
	Course Objective :
Indian Economic Pollicy	Starting from basic definition of development and growth this course reviews major trends in aggregate economic indicators in India. Comparing the situations in developed and developing world this paper provides a wide range of data and knowledge to students to understand world economics. It provides an understanding or linkages between various sectors of economy, and role of government. Learning Outcomes: 1. This course will help students understand the key issues related to the Indian economy. 2. The students will come to know the Features of
	 Indian Economy. The students will Learn Agriculture, Industrial and Service Sectors of the economy. The students will get familiar with various Poverty Alleviation and Employment Generation Schemes. It will broaden their horizons and enable them to analyze current economic policy and help in decision making. It allows student to look at the bigger picture and to find solutions for Economic Development. The course also serves as the base for further study of sector specific policy discussion that is pursed in the course in the next semesterStudents will have capability to understand government policies and will enable informed participation in economic decision making. This paper allows student to expand their critical thinking. It will make them aware of the current state of Indian Economy and what actions are needed in terms of policies and institutional changes.
Viva-Voce	Remedial teaching and student counselling using tutorial and preceptorial methods to help weaker students to frame answers to assignments and develop writing skills, feature in the regular course work. Personal reference material is also made available to students who are writing project proposals or developing research ideas on areas of common interest. Mock Group Discussions and Viva-voce interviews, and course counselling are regularly conducted at the Department to improve the factual knowledge of students, and to widen their

cur pro	erm Paper topics are carefully selected to reflect rrent economic policy issues, and reading lists ovided so that PG students develop ready owledge of present economic scenarios in India.
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	M.A (Economics) SEMESTER - III	
Course no	Name of Course	Programme Outcomes
PG/ECO(C)/3 01	Public Finance	Course Objective: The course main objective is to get learner familiarise with main issues of government finances, its financial functions and issues related to it, with reference to Indian economy. Learning Outcomes: • Analyse the fiscal functions of the government and to make learner familiarise with taxes and main issues in government expenditure • Understand the sources of finance both public and private, demonstrate the role of government to correct market failures and possible advantage of public financing • Learn the working of both monetary and fiscal policies • Critically analyse the issues in present Indian tax system • Learn various concepts of budget and deficits • Understand fiscal federalism in India and issues related to it Critically examine the sources of state and local finances. • To provide the students with thorough analytical understanding to analyze public goods, externalities, market failures; economics of government expenditure, taxation and public borrowing; • The students will familiar with Maximum Social Advantage. • The students get enabled to know Public Expenditure, Public Revenue and Public Debt.
PG/ECO(C)/3 02	Monetary Economics	Course Objective: The objective of the course is to help the learner understand the theory and functioning of the monetary and financial sectors of the economy along with domain and tools of monetary policy. Learning outcomes:

Understand the concept of money and determination of money supply knowledge of financial Get markets institutions and various issues faced in it due to lack of information and other issues Understand the concept and theories of interest rate determination Learn the role of central bank along with working of monetary policy. Get exposure to current monetary policy in India. PG/ECO(C)/3 Research Methodology **Course Objective:** 03 The course begins with the formulation of a research problem and covers the issues concerning the generation of primary sample data. In this regard the designing of a questionnaire, the methods of design of a sample and its size, the modes of data collection from direct interview to online surveys, the appreciation of possible sources of errors, and the cleaning of data forms the bulk of the classroom instruction. Course Learning Outcomes: The course imparts skills to undertake data-based research. The student enrolling in this course would develop competency in executing sample surveys and would have reasonable exposure to a variety of secondary data sources. **Learning Outcomes:** Learning outcomes of this course are crucial for students aspiring to become future researchers. This course equips students in the rudiments of a good research work and research paper. It makes students aware of the basic methodological issues such a identifying a concrete research problem, writing a theme-based literature survey, developing writing skills, designing a field survey- the sampling frame, using random numbers for samples, drawing up the questionnaire, data entry after field survey, tabulating the data and interpreting it with graphs and figures motivation, objectives, theme-based literature survey, developing writing skills, conducting field surveys, sampling frame, sample and use of random numbers, preparing questionnaire, pilot survey, data entry, tabular representation and graphical interpretation. • Role of footnotes or end notes in a research paper • Bibliography, reference and citation, Abstract • Power Point Presentation of papers with graphs and charts. PG/ECO(C)/3

04		Course Outcomes :
	Agricultural Economics	1. The student will come to know the basics of
	Or	agriculture and rural economics.
	Labour Economics	2. The student will get familiar with land distribution
	Or	and agriculture production.
	Gender Economics	3. The student will learn the diversification in
	Or	agriculture and about agriculture finance.
	Computer Application in	4. The students will learn the importance of labour
	Economic Analysis	economics.
		5. The students will get familiar with characteristics
		of Industrial labour.
		6. The students will come to know about labour
		legislation and labour unions.
		7. The students will learn Social Security and Labour
		Welfare measures for labours.
		8. The students will come to know about various
		devices related to computer system.
		9. The students will come to know about the number
		system used in computer system.
		10. The students will get familiar with various types
		of Basic Computer Application software's.
		11. The students will come to know about word
		processing software and internet.

M.A (Economics) SEMESTER - IV			
Course no	Name of Course	Programme Outcomes	
PG/ECO(C)/4	Industrial Economics	1. The students will come to know about Industrial	
01		Process, growth of Firm and Process of Innovation. 2.	
		The students will study rationalism and effects of	
		globalization on industry.	
PG/ECO(C)/4	Economic Planning	Course Objective:	
02		This course critically reviews economic development	
		and its determinants in India and places these against	
		the backdrop of major policy debates in India in the	
		post-independence period	
		Learning outcomes:	
		• Learn the concept of economic development and	
		its various determinants along with focusing on	
		Indian planning framework	
		 Understand the SDGs in context of India 	
		• Learn the major factors responsible for the	
		process of development along with examination of their role	
		• Learn about the demographic profile of India	
		and its impact and association with economic	
		development	
		Broaden their knowledge about employment	
		structure in India	
		• Critically analyse the Indian economic	
		development in terms of various macroeconomic	
		indicators.	

PG/ECO(C)/4 03	Economics of Human Development	Learn the concept of economic development and its various determinants along with focusing on Indian planning framework Understand the SDGs in context of India Learn the major factors responsible for the process of development along with examination of their role Learn about the demographic profile of India and its impact and association with economic development Broaden their knowledge about employment structure in India Critically analyse the Indian economic development in terms of various macroeconomic indicators Human Development and Family Science focuses on individual growth, development, and change throughout the lifespan, and how different relationships can impact these processes.:
PG/ECO(C)/4 04	Demography Or History of Economics Thought Or Econometrics	 Course Outcomes: Understanding about the origin and development of economic ideas and their interrelations. Familiarity about how economic thought has evolved over time with a critical comparison of the major contributions. Learning of the fact that history of economic ideas is different from economic history and history of economics. Understanding of the ancient and medieval economic thoughts, such as Mercantilism and Physiocracy. Concepts of data (cross section, time series, pooled ,panel data) Classification of data from measurement perspective(ratio scale, ordinal, interval, nominal. Concept of population, sample Sampling procedures Concept of distribution.
PG/ECO(C)/4 04	Dissertation/ Viva-voce (Any one)	Course Objective: The main objective of the course is to help the student to learn about the sample surveys which will help them in increasing their employability Learning outcomes: • learn about the process of survey research along with its various types

- understand the methods of collecting primary data and various sources of secondary data along with getting use to the various random and non-random sampling techniques
- learn to design and prepare questionnaire for surveys along with process of testing it
- learn various methods of conducting qualitative research along with dealing with issues with sample surveys such as nonresponse from the respondents
- learn various methods and process of conducting participatory research
- understand various types of measurements scales which will help them to input appropriate data into them for measurements learn various scaling techniques which will help them in the process of conducting survey research
- The main objective of the course is to deliver practical experience and exposure to the learner about the economic and entrepreneurial activities and to further motivate them towards entrepreneurship

Dr. Shivanand Nautiyal Govt. PG College Karnprayag Chamoli Uttarakhand

Programme Outcomes Report of Political Science

The Department is dedicated to promote teaching and research in diverse fields of political science including Indian politics, comparative politics, international relations and human rights while maintaining the scholarship in some of the conventional fields like political theory and political philosophy. Presently, the department is offering Master's programmes in Political Science. The learning outcomes of the programmes are as follows:

- To develop comprehensive understanding of the subject by teaching both conventional and new areas of relevance in the domain of political theory and philosophy, Indian politics, comparative politics, public administration and international politics.
- To develop comprehensive and interdisciplinary knowledge by emphasizing inter-linkages between various political, economic and social issues and challenges.
- To generate socially-informed knowledge and cater to the educational upliftment of marginalized communities through papers like Human Rights, Political Ideas in Modern India and Women and Politics in India
 - To develop theoretically rich and empirically grounded knowledge
 - To motivate and inform students about the opportunities and future prospects in the field. To develop the overall personality of students and prepare them to compete and succeed in their endeavours.
 - To provide a progressive, healthy and vibrant environment to its students as well as teachers for the purpose of developing a department known for its academic and intellectual pursuit. To inculcate the values of tolerance, progressiveness and fraternity that contributes towards the making of a healthy and prosperous society.
- An M.A Dissertation and its viva-voce was also introduced in 2019 to train the students in writing research papers.

Name of Department: Political Science

B.A. in Political Science

1. POLITICAL THEORY

Analysing what is Politics and explaining the approaches to the Study of Political Science – Normative, Behavioural, Post Behavioural, Feminist. Assessing the theories of State (Origin, Nature, Functions): Contract, Idealist, Liberal and Neo-Liberal Theories. Explaining the Concept of State Sovereignty: Monistic and Pluralistic Theories. Analysing the changing concept of Sovereignty in the context of Globalisation. Understanding basic concepts of Liberty, Equality, Rights, Law and Justice. Assessing empirical Political Theory: System's Analysis, Structural Functionalism. Explaining Dialectical Materialism and Historical Materialism with special reference to relationship between base and superstructure. Analysing the theory of class and class

struggle. Describing the Marxist Approach to politics. Analysing Marx's concept of Freedom and Democracy: Nature, Features and Critique. Discussing Marx's Theory of State with special reference to Relative Autonomy of the State. Explaining Marxian theory of Revolution.

2. COMPARATIVE GOVERNMENT AND POLITICS

Tracing the evolution of Comparative Politics as a discipline and drawing a distinction between Comparative Politics and Comparative Government. Investigating the nature and scope of Comparative Politics. Analysing the approaches the approaches and models of comparison: systems analysis; structural functionalism; and institutional approach. Critically analyzing the features of a liberal democratic and socialist political system with focus on UK, USA and the People's Republic of China. Discussing the features of a federal system with special reference to USA and Russia. Conducting an intensive comparative study of the Executive (UK, USA, France and Russia); Legislature (UK, USA, CHINA); the Judiciary (UK, USA, CHINA). Critically looking at the rights of the citizens of UK, USA and CHINA from a comparative perspective.

3. REPRESENTATIVE POLITICAL THINKERS

Providing an insight into the dominant features of Ancient Western Political Thought: Ancient Greek political thought with focus on Aristotle and Plato Manu state theory of Manu justice and penal systems. Examining the features of Medieval Political Thought. Evaluating the Renaissance; political thought of Reformation; and Machiavelli. Critically examining Bodin's contributions to the theory of Sovereignty; Hobbes as the founder of the science of materialist politics; Locke as the founder of Liberalism with focus on his views on natural rights, property and consent; and Rousseau's views on Freedom and Democracy; Bentham's Utilitarianism; and John Stuart Mill's views on liberty and representative government. Green's concept of liberty. Taking an insight into the following: Hegel's Dialectical method and State;

4. INDIAN GOVERNMENT AND POLITICS

Introducing the Indian Constitution with a focus on the role of the Constituent Assembly and examining the essence of the the Preamble. Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles. Assessing the nature of Indian Federalism with focus on Union-State Relations. Critically analyzing the important institutions of the Indian Union: the Executive: President; Prime Minister, Council of Ministers; Governor, Chief Minister and Council of Ministers; The legislature: Rajya Sabha, Lok Sabha, Speaker, Committee System, State Legislature, The Judiciary: Supreme Court and the High Court's:

composition and functions- Judicial Activism Looking at the Constitutional Amendment Procedure with focus on the main. Critically evaluating the Indian Party system – its development and looking at the ideology of dominant national parties Evaluating the role of various forces on Indian politics: religion; language; caste; tribe; regionalism; class and peasants Evaluating the Electoral Process in India with focus on the Election Commission: Composition, Functions and Role Investigating the New Social Movements since the 1970s: environmental movements, women's movement and human rights movement.

5. INTERNATIONAL POLITICS AND RELATIONS

Explaining scope and subject matter of International Relations as an autonomous academic discipline. Approaches and methods to study the discipline through Political realism, Pluralism and Worlds system's Model. Examining the issues of Underdevelopment, Terrorism, Regionalism and Integration that characterizes the Post Second World War order. Studying the role of Diplomacy. Explaining certain basic concepts like Globalisation in contemporary world order. Describing the Cold War phases and understanding the post Cold War era. Discussing the developments in European Ethnonationalism since 1990's. Tracing the growth of European Union Examining Indian Foreign Policy: Basic Principles, Evolution and Bilateral Relations. Evaluating the working of UN and its organs; Peace keeping Function and Human Rights. Analysing the Foreign Policy of USA and China. Studying the developments in third world countries in post world war II era like NAM: Relevance, ASEAN, SAARC, OPEC, OAU, BRICS and SCO. Climate change, Globalization and Nuclear proliferation.

6. PUBLIC ADMINISTRATION

Explaining the nature, scope and evolution of Public Administration; Private and Public Administration; Principles of Socialist Management. Discussing making of Public Policy Making and methods of Implementation Analysing the major Concepts in Public Administration. Tracing the Challenges in the discipline of Public Administration like New Public Administration (NPA); Comparative Public Administration (CPA) and Development Administration. Discussing the Ecological approach to Pub. Adm. Analysing the Administrative Processes: decision making; communication and control; leadership; coordination. Discussing Weberian and Marxian theories of bureaucracy. Studying the Organisation of the Union Government and State Government. Examining the Institutions of Local Self Government in India Assessing the relationship between the Citizen and Administration: Lokpal and Lokayukt. Understanding the concept of District Administration in India. Examining the Institutions of Financial Administration in India. Analysing the Civil Service in India. Explaining the Planning and Planned Administration in India. Continuity and Change in Indian Administration.

Programme Outcomes Report of Political Science M.A. in Political Science

1. WESTERN ANCIENT & MEDIEVAL POLITICAL THOUGHT

To demonstrate knowledge of key thinkers and concepts. To understand the nature, methods and significance of political thought. To analyse the theory of ancient & medieval political thought of Greek and India. To appreciate the ideas of them in context of classification of government, law and revolutions and slavery. To understand the relationship between religion and politics in early modern western political thought. To acquire knowledge about modern political thinkers and theirs view on state craft. To compare with the social contractualists thoughts of Hobbes, lock, and Rousseau and their view regarding state, government and general will. To appreciate the concept of liberty, representative government., To analyse the Marxist philosophy in making a better society. To thoroughly compare the democratic revolution and creation of civil society. To appreciate the various social and political ideas of Indian political thinker To inculcate the spirit of ahimsa, satyagraha, through Gandhi ideology To criticizes the causes for the theory of caste system in India and their impact.

2. COMPARATIVE POLITICS

Upon successful completion of this course, students will be able to:

Define and apply key concepts in comparative politics, including but not limited to nation-states, political regimes, political identity, gender and politics, and political violence Explain and evaluate the importance of specific historical events in the context of the political and economic development of the countries studied 3 Compare and contrast the political systems of the countries explored in the course, paying particular attention to historical, political, economic, geographical, and moral aspects of governance in a variety of countries. Use the comparative method to analyze contemporary political issues. Demonstrate an ability to communicate in writing your knowledge and beliefs about the institutions and forces shaping the political systems of several countries.

3. INDIAN POLITICAL SYSTEM

Introducing the Indian Constitution with a focus on the role of the Constituent Assembly and examining the essence of the Preamble. Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles. Assessing the nature of Indian Federalism with focus on Union-State Relations. Critically analyzing the important institutions of the Indian Union: the Executive: President; Prime Minister, Council of Ministers; Governor, Chief Minister and Council of Ministers; The legislature: Rajya Sabha, Lok Sabha, Speaker, Committee System, State Legislature, The Judiciary: Supreme Court and the High Courts: composition and functions- Judicial Activism Looking at the Constitutional Amendment Procedure with focus on the main recommendations of the Constitutional Review Commission (Venkatachalliah Commission) Critically evaluating the Indian Party system – its development and looking at the ideology of dominant national parties Evaluating the role of various forces on Indian politics: religion; language; caste; tribe; regionalism; business; working class and peasants Evaluating the Electoral Process in India with focus on the Election Commission: Composition, Functions and Role Investigating the New Social Movements since the 1970s: environmental movements, women's movement and human rights movement

4. LOCAL SELF-GOVERNMENT IN INDIA

Among India's three units of governance, local self-government democratically governs the grass root level of the society. The governing structure in India is made up of three tiers – the central government, the state government, and the local self-government. The local self-government is made up of democratically elected representatives of the local people.

Two major forms of local self-government exist in India:

In the urban areas, that is, in cities and towns, local self-governance is carried out by municipalities and corporations. In the rural areas, that is, in villages, Zila Parishad, block samitis, and panchayats carry out the functions of local self-governance.

Local self-government is a form of democratic governance where the participation of even the grass root level of society is encouraged and included. Self-governing village communities have always existed in India since the earliest of times. Slowly over a period of time, these village bodies were converted to form Panchayats. Panchayats or Panchayati Raj is one of India's oldest local self-government systems. The word 'Panchayat' means an assembly (ayat) or five (panch) people who rule (raj). Elected local self-government bodies came into existence after 1882, when Lord Rippon, the father of local self-government, took the initiative to create these bodies. At that time, these were known as local boards. After the Government of India Act in 1919, village panchayats were firmly established in several provinces. While Rippon is widely known as the father of local self-government, Mahatma Gandhi is also a key player in decentralising political and economic power at the grassroots levels. Gandhi supported the strengthening of village panchayats and ensured the involvement of local self-governments in all developmental initiatives. With the passing of the 73rd and 74th Constitutional amendments, it became mandatory for every state to have rural and urban local selfgovernments in place and the mechanisms to fund these bodies. It also became compulsory that these bodies carry out elections every five years.

With the creation of this local governance, rural and urban local bodies were given the constitutional status that ensured uniformity in their functioning and structure across India. At present, there are over 250,000 local self-government bodies across the country, with over 3.1 million elected representatives. Out of this, 1.3 million representatives are women.

5. WESTERN MODERN POLITICAL THOUGHT

The subject has served as an important philosophical and ideological foundation in the study of political science. The ideas of famous political thinkers such as Plato, Aristotle, Machiavelli, Marx, Hobes, Locke, Rousseau, Mill and others are studied with their historical, social and cultural context so as to relate to contemporary political society. Students are expected to develop critical thinking and arguments from this course.

6. MODERN POLITICAL SYSTEM

Major Political Systems is introduced for the Third Semester. Students will study distinct political systems of countries such as USA, UK, Switzerland and China having different characteristics in terms of party system, constitutions, form of government, powers and functions of different

organs of the government. This is a foundational course in the study of comparative government. It will not only give knowledge about other political systems around the world but will also train students towards comparative approaches and methods.

7. INDIAS FOREIGN POLICY

Indian Foreign Policy introduces the determining principles of India's foreign policy to students. It highlights the central realities, issues and developments pertaining to India's foreign policy at the bilateral, regional and global levels. The course imparts an understanding of India's important bilateral relationship and the country's role in global political regimes.

8. RESEARCH METHODOLOGY

The course focuses on social science research methods. Methods discussed include interview, content analysis, focus group discussions and surveys. By the end of the subject students should be able to:

Demonstrate the ability to choose methods appropriate to research aims and objectives Understand the limitations of particular research methods Develop skills in qualitative and quantitative data analysis and presentation Develop advanced critical thinking skills Demonstrate enhanced writing skills By the end of the subject students should be able to: Demonstrate the ability to choose methods appropriate to research aims and objectives Understand the limitations of particular research methods Develop skills in qualitative and quantitative data analysis and presentation Develop advanced critical thinking skills Demonstrate enhanced writing skills

9. INDIAN POLITICAL THOUGHT

Indian Political Thought is introduced to the students in their final semester. It deals with the writings and thoughts articulated by Indian thinkers from the ancient till the modern period. The course will also enable the student to understand the emergence and articulation of sociopolitical issues such as statecraft, nationalism, socialism, satyagraha, swadeshi etc. from an Indian perspective through the works of Manu, Raja Rammohan Roy, Swami Vivekanand, Gandhi, Ambedkar, Nehru, Tilak, Gokhale and others.

10. INTERNATIONAL RELATIONS

International Relations introduces the key concepts and theoretical bases to the study of international relations and provides a comprehensive overview of the evolution of the international system. Dealing with issues of power and international security, the course will enable students to understand the international political system as it is and as it ought to be.

11. PUBLIC ADMINISTRATION

Public Administration provides an introduction to the discipline of Public Administration. The emphasis is on the administrative theory, including organization and administrative behaviour. The course also specifically explores issues in Indian administration including legislative, executive and financial administration. The course is expected to deliver leadership and management skills.

12. INTERNATIONAL ORGANISATION

What are international (intergovernmental) organisations? Why have states established them and what roles do they play in international theoretical debates relations? This course examines international organisations, both as forums for inter-state cooperation states and as actors in their own right. The course includes discussion of traditional and critical approaches to the study of international organisations and applies these approaches to examples of organisations working in different issue areas (e.g. security, trade, environment, human rights) and in the Asia-Pacific region. Key questions for debate include what international organisations are, where they come from, and what different theoretical approaches can tell us about them. The crucial relationship between states and international organisations and how international organisations can be actors in their own right are also examined.

Learning Outcomes

Upon successful completion, students will have the knowledge and skills to:

Demonstrate knowledge and critical understanding of the major traditional and critical theories of International Relations on international organisations Understand the historical development of international organisation and their current operations in different issue areas Analyse contemporary debates on the role and effect of international organisations as forums for inter-state cooperation and as actors in international relations Conduct a student research project and make clear and concise arguments in written assignments and oral class participation

13. THEORIES OF INTERNATIONAL POLITICS

This course seeks to equip students the basic tools for understanding international relations. It also introduces major events and developments that have shaped the contemporary international system. It aims to capture the changing dynamics of the international politics by taking up burning and relevant issues which have potential to alter its contours.

14. INTERNATIONAL LAW

To teach and discuss the important doctrines of international law. To help students understand both the legal and political aspects of international decisions and events. It is my belief that international law cannot be discussed or understood without taking into account the political realities that surround every international dispute. Similarly, the outcome of many international political disputes is profoundly affected by international law. To encourage students to think more analytically, write more clearly, and present themselves effectively in class discussions and presentations. Specifically, I expect students to learn to read a text carefully as is required of anyone who works with legal documents. Students should also improve their presentation skills in this class, and they should become better at explaining and defending their ideas to a group. Each student is also expected to write clearly and effectively.

Learning Outcomes:

Our activities in this course will build on several of the learning outcomes listed for the Political Science major at http://learningoutcomes.byu.edu. Our specific course activities as related to those learning outcomes are as follows:

Demonstrate advanced understanding of the discipline of political science, including familiarity with each of the four major subfields: American politics, comparative politics, international relations, and political philosophy—Students will discuss the moral issues surrounding issues of international law such as the power of the state to wage war, individual rights to be protected from state power, the obligation to protect and preserve our natural environment, the treatment of not citizens, the right of representation of diverse peoples in international organizations, and rights of self rule and autonomy. Understand political science and its subfields—Students will learn the role of legal norms in international relations and will be able to discuss the relative importance of international law in constraining the actions of states. Through our daily analysis of the text of treaties and court decisions, we will practice textual analysis as it is

done by legal professionals. In addition, the oral presentation, papers, and exams will also require a high level of competency at legal textual analysis, testing how well students have acquired this skill from the daily reading and discussion of cases.

15. POLITICAL PHILOSOPHY OF MAHATMA GANDHI

Gandhi on Religion and Politics: Gandhi saw a very close relationship between religion and politics. He condemned politics which was bereft of religion on the ground that it makes man corrupt, selfish, unreliable, materialistic and opportunistic. Gandhi on Non-Violence (Ahimsa): Another notable feature of Gandhi's political thought was his advocacy of non-violence or Ahimsa. It may be observed that the concept of Ahimsa was not an original contribution of Gandhi and had been known and practised all over India since ancient times. 3) Satyagraha: Gandhi's concept of Satyagraha is intimately related to his concept of non-violence, and constitutes an important part of his thought. Satyagraha literally means 'holding fast to truth'. Gandhi evolved the principle of Satyagraha even before its name was coined. Gandhi's Scheme of Education: Gandhi was strongly opposed to the English system of education and favoured its replacement by an indigenous scheme. His opposition to the western system of education was on account of a variety of reasons. First, it was based on foreign culture and completely excluded the indigenous culture. Second, it ignored the culture of heart and hand and confined itself only to the head. Third, it was imparted through foreign medium. He argued that the time which a child spends in mastering the vagaries of English language could be better utilized for imparting essential knowledge about the basic facts of civil life.

16. HUMAN RIGHTS

Human Rights introduces the idea and development of human rights. It deals with the role of international organizations such as the United Nations and the Amnesty International in the assertion of basic rights of all as well as rights of minorities and weaker sections in the society- social, economic and political. It also offers study of Human Rights from the Indian perspective- both the legal and institutional frameworks. The course

will empower students to stand for the protection and promotion of human rights and thus contribute to national and international peace.

संस्कृत विभाग

महाविद्यालय में स्नातक एवं स्नातकोत्तर कक्षाओं में कला संकाय के अन्तर्गत संस्कृत विषय एक सामान्य विषय के रूप में पढाया जाता है ।

स्नातक कक्षायें वार्षिक रूप से संचालित होने के कारण बी०ए० प्रथम वर्ष , बी०ए० द्वितीय वर्ष एवं बी०ए० तृतीय वर्ष के अन्तर्गत छात्रों को प्रत्येक वर्ष दो-दो प्रश्न पत्र पढने होते हैं । स्नातकोत्तर कक्षाओं में छात्र संस्कृत विषय के प्रत्येक सेमेस्टर में चार-चार प्रश्न पत्र पढते है ।

बी०ए० प्रथम वर्ष

प्रथम प्रश्न पत्र - सुगम पाठ , व्याकरण एवं अनुवाद

- विद्यार्थी संस्कृत साहित्य का सामान्य परिचय प्राप्त कर नीतिकाव्य से परिचित हो सकेंगे ।
- संस्कृत नीतिकाव्य की सुगीतात्मकता का सौन्दर्यबोध कर सकेंगे ।
- नीतिकाव्य में प्रयुक्त नैतिकशिक्षा का बोध कर सकेंगे ।
- संस्कृत व्याकरण का सामान्य ज्ञान प्राप्त कर उसकी वैज्ञानिकता से सुपरिचित हो सकेंगे ।
- संस्कृत वर्णों का शुद्ध उच्चारण से कौशल का विकास होगा ।
- स्वर , व्यंजन एवं विसर्ग सिन्ध का विशिष्ट ज्ञान एवं उनके अनुप्रयोग का कौशल विकसित होगा ।

द्वितीय प्रश्न पत्र - नाटक , अलंकार एवं छन्द

- विद्यार्थी संस्कृत साहित्य का सामान्य परिचय प्राप्त कर संस्कृत काव्य के विभिन्न भेदों से परिचित हो सकेंगे ।
- संस्कृत नाटक के अध्ययन से उसमें निहित महान चरित्रों का अध्ययन कर सकेंगे ।
- संस्कृत नाटक में निहित रस , छन्द एवं अलंकारों से परिचित हो सकेंगे ।
- नाटक में निहित संदेशों के माध्यम से छात्र/छात्रायें प्रकृति प्रेम , स्त्री-पुरुष समानता जैसी भावनाओं को सीखेंगे ।
- नाटक की पारिभाषिक शब्दावली से सुपरिचित होंगे तथा संवाद एवं अभिनय कौशल से पारंगत होंगे ।

नाटक साहित्य के विभिन्न नाटककारों का परिचय प्राप्त कर विद्यार्थियों का ज्ञान वर्धन होगा

बी०ए० द्वितीय वर्ष

प्रथम प्रश्न पत्र - गद्यकाव्य , प्राचीन एवं अर्वाचीन संस्कृत साहित्य का इतिहास

- गद्यकाव्य के अध्ययन से विद्यार्थी गद्य साहित्य के विकास से परिचित हो सकेंगे ।
- विद्यार्थी गद्यकाव्य के निर्माण एवं गद्यकारों से परिचित हो सकेंगे ।
- प्राचीन एवं अर्वाचीन गद्यसाहित्य के अध्ययन से तात्कालिक समाज से भी परिचित हो सकेंगे ।
- गद्य साहित्य में निहित उपदेशों के माध्यम से चारित्रिक विकास होगा ।

द्वितीय प्रश्न पत्र - वेद एवं दर्शन

- वेदों के अध्ययन से विद्यार्थी वेदों के रचना काल का ज्ञान प्राप्त कर सकेंगे।
- वेदों के अध्ययन से विद्यार्थी वेदों में निहित सूक्तियों से परिचित हो नैतिक ज्ञान से भिज्ञ हो सकेंगे ।
- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के महत्व को जान सकेंगे ।
- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के भेदों एवं उसकी आचारमीमांसा ,
 प्रमाणमीमांसा आदि का ज्ञान प्राप्त कर पायेंगे ।
- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के अर्थ एवं दृष्टि से भिज्ञ हो सकेंगे ।

बी०ए० तृतीय वर्ष

- प्रथम प्रश्न पत्र काव्यालोचन , योग , आयुर्वेद तथा वास्तुविज्ञान
- विद्यार्थी साहित्यशास्त्र के अध्ययन से संस्कृत काव्य की विधाओं से परिचित हो सकेंगे ।
- साहित्यशास्त्र में निहित विषयों काव्यलक्षण , वाक्य निर्माण ,नाटक लक्षण आदि को समझ पायेंगे ।
- योग दर्शन के अध्ययन से योग के महत्व को समझ पायेंगे ।
- योग का जीवन में क्या प्रभाव हो सकता है एवं योग शास्त्र में निहित अष्टांग योग की जीवन हेतु उपयोगिता को समझ सकेंगे ।
- आयुर्वेद के ज्ञान से स्वास्थ्य सम्बंधी उपायों को जान सकेंगे ।

वास्तु-विज्ञान के अध्ययन से वास्तु सम्बन्धी जानकारी को प्राप्त कर भविष्य में इसका
 उपयोग गृह निर्माण संबन्धी रोजगार में कर सकते हैं ।

द्वितीय प्रश्न पत्र - उत्तराखण्ड का अर्वाचीन संस्कृत साहित्य, भारतीय संस्कृति एवं निबन्ध

- उत्तराखण्ड के अर्वाचीन संस्कृत साहित्य के साहित्यकारों का ज्ञान प्राप्त हो सकेगा ।
- उत्तराखण्ड के अर्वाचीन संस्कृत साहित्य के अध्ययन से आधुनिक काव्यविधाओं का परिचय होगा ।
- भारतीय संस्कृति के अध्ययन से संस्कृति के विषयों वर्ण-व्यवस्था ,आश्रम -व्यवस्था आदि का ज्ञान होगा ।
- भारतीय संस्कृति के अध्ययन से संस्कृति के विषयों के महत्व से परिचित होंगे ।
- निबन्ध से लेखन कुशलता का विकास होगा ।

एम०ए० प्रथम सेमेस्टर

प्रथम प्रश्न पत्र - वैदिक सूक्त एवं निरुक्त

- विद्यार्थी वैदिक सुक्तों का अध्ययन कर वैदिक ज्ञान के बारे में जानकारी प्राप्त कर सकेंगे।
- वैदिक सूक्त में निहित विषयों एवं चर्चाओं से दार्शनिक विषयों का ज्ञान प्राप्त कर सकेंगे।
- सूक्त किस प्रकार वेदों का भाग है यह जानकारी भी छात्र प्राप्त कर पाएंगे।
- निरुक्त के विषय में ज्ञान निरुक्त के अध्ययन से छात्र प्राप्त कर पाएंगे।
- निरुक्त की विशिष्टता क्यों है? यह जानकारी छात्र प्राप्त कर पाएंगे।

द्वितीय प्रश्न पत्र -नाटक एवं नाट्य साहित्य का इतिहास

- विद्यार्थी नाटक के अध्ययन से नाटक के विषयों में ज्ञान प्राप्त कर पाएंगे।
- नाटक में निहित संदेशों से विद्यार्थी अच्छे आचरण से युक्त हो पाएंगे।
- नाट्य साहित्य के इतिहास के अध्ययन से छात्र-छात्राएं नाट्य साहित्य के आचार्यों के बारे में ज्ञान प्राप्त कर पाएंगे।
- नाट्य में निहित उपदेशों जैसे प्रकृति वर्णन, रस, छंद, अलंकार आदि का ज्ञान प्राप्त कर पाएंगे।

तृतीय प्रश्न पत्र -भारतीय दर्शन

- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के महत्व को जान सकेंगे ।
- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के भेदों एवं उसकी आचारमीमांसा ,
 प्रमाणमीमांसा आदि का ज्ञान प्राप्त कर पायेंगे ।
- दर्शन के अध्ययन विद्यार्थी भारतीय दर्शन के अर्थ एवं दृष्टि से भिज्ञ हो सकेंगे ।
- भारतीय दर्शन के अध्ययन से भारतीय दर्शन के भेदों सांख्य न्याय मीमांसा वेदांत एवं जैन बौद्ध दर्शन के बारे में विद्यार्थी जानकारी प्राप्त कर पाएंगे।
- भारतीय दर्शन के अध्ययन से भारतीय दर्शन के सिद्धांतों को छात्र-छात्राएं जान पाएंगे।

चतुर्थ प्रश्न पत्र -व्याकरण एवं अनुवाद

- संस्कृत व्याकरण का सामान्य ज्ञान प्राप्त कर उसकी वैज्ञानिकता से सुपरिचित हो सकेंगे ।
- संस्कृत वर्णों का शुद्ध उच्चारण से कौशल का विकास होगा ।
- कारकों के अध्ययन से छात्र-छात्राएं वाक्य निर्माण को समझ पाएंगे।
- समास के अध्ययन से विद्यार्थी बड़े-बड़े शब्दों का निर्माण करना समझ पाएंगे।

एम०ए० द्वितीय सेमेस्टर

प्रथम प्रश्न पत्र -महाकाव्य

- महाकाव्य के अध्ययन से छात्र महाकाव्य के कवियों के बारे में अध्ययन कर पाएंगे।
- महाकाव्य के अध्ययन से विद्यार्थी महाकाव्य के निर्माण उसमें निहित संदेशों एवं सूक्तियां के ज्ञान से चारित्रिक विकास कर पाएंगे।
- महाकाव्य के अध्ययन से महाकाव्य के भेदों के बारे में ज्ञान प्राप्त कर पाएंगे।

द्वितीय प्रश्न पत्र - धर्मशास्त्र

- धर्म शास्त्र के अध्ययन से धर्म शास्त्रों में निहित समाज के कल्याण की भावनाओं को विद्यार्थी समझ पाएंगे।
- धर्म शास्त्र के अध्ययन से समाज के विभाजन के विषय को छात्र समझ पाएंगे।
- धर्म शास्त्र के अध्ययन से नाना विषयों जैसे अर्थ ग्रहण पुरुषार्थ वर्ण व्यवस्था इत्यादि विषयों के बारे में ज्ञान प्राप्त कर पाएंगे।

तृतीय प्रश्न पत्र - पुराणेतिहास

- पुराणेतिहासके अध्ययन से विद्यार्थी भारतीय इतिहास का ज्ञान प्राप्त कर पाएंगे।
- पुराणों में वर्णित सृष्टि की उत्पत्ति, स्थिति एवं नाश से संबंधित सिद्धांतों के बारे में विद्यार्थी ज्ञान ग्रहण कर पाएंगे।
- पुराणों के अध्ययन से पुराणों का किस प्रकार भारतीय संस्कृति में महत्व को छात्र समझ पाएंगे।

चतुर्थ प्रश्न पत्र - काव्यशास्त्र

- विद्यार्थी काव्यशास्त्र के अध्ययन से संस्कृत काव्य की विधाओं से परिचित हो सकेंगे ।
- काव्यशास्त्र में निहित विषयों काव्यलक्षण , वाक्य निर्माण ,नाटक लक्षण आदि को समझ पायेंगे ।
- काव्यशास्त्र के अध्ययन से छात्र-छात्राएं काव्यशास्त्र की पारिभाषिक शब्दावली को जान पाएंगे।

एम०ए० तृतीय सेमेस्टर

प्रथम प्रश्न पत्र - गद्य काव्य

- गद्यकाव्य के अध्ययन से विद्यार्थी गद्य साहित्य के विकास से परिचित हो सकेंगे ।
- विद्यार्थी गद्यकाव्य के निर्माण एवं गद्यकारों से परिचित हो सकेंगे ।
- प्राचीन एवं अर्वाचीन गद्यसाहित्य के अध्ययन से तात्कालिक समाज से भी पिरचित हो सकेंगे ।
- गद्य साहित्य में निहित उपदेशों के माध्यम से चारित्रिक विकास होगा ।

द्वितीय प्रश्न पत्र - भारतीय संस्कृति एवं निबंध

- भारतीय संस्कृति के अध्ययन से संस्कृति के विषयों वर्ण-व्यवस्था ,आश्रम -व्यवस्था आदि का ज्ञान होगा ।
- भारतीय संस्कृति के अध्ययन से संस्कृति के विषयों के महत्व से परिचित होंगे ।
- निबन्ध से लेखन कुशलता का विकास होगा ।

तृतीय प्रश्न पत्र - भाषा विज्ञान

- भाषा भाषा विज्ञान के अध्ययन से छात्र भाषा के संबंध में जानकारी प्राप्त कर पाएंगे।
- भाषा विज्ञान के अध्ययन से विद्यार्थी भाषा के निर्माण के बारे में जानकारी प्राप्त कर पाएंगे।
- भाषा विज्ञान के अध्ययन से विद्यार्थी ध्विन विज्ञान शब्द विज्ञान एवं अर्थ विज्ञान के बारे में जानकारी प्राप्त कर पाएंगे।

चतुर्थ प्रश्न पत्र - अर्वाचीन संस्कृत साहित्य

- अर्वाचीन संस्कृत साहित्य के साहित्यकारों का ज्ञान प्राप्त हो सकेगा ।
- अर्वाचीन संस्कृत साहित्य के अध्ययन से आधुनिक काव्यविधाओं का परिचय होगा ।
- अर्वाचीन संस्कृत साहित्य के अध्ययन से छात्र अर्वाचीन साहित्य में निहित सामाजिक समस्याओं के वर्णन को जान पायेंगे ।

एम०ए० चतुर्थ सेमेस्टर

प्रथम प्रश्न पत्र - ऐच्छिक गद्य काव्य तथा चंपू

- गद्यकाव्य के अध्ययन से विद्यार्थी गद्य साहित्य के विकास से परिचित हो सकेंगे ।
- विद्यार्थी गद्यकाव्य के निर्माण एवं गद्यकारों से परिचित हो सकेंगे ।
- प्राचीन एवं अर्वाचीन गद्यसाहित्य के अध्ययन से तात्कालिक समाज से भी परिचित हो सकेंगे ।
- गद्य साहित्य में निहित उपदेशों के माध्यम से चारित्रिक विकास होगा ।
- चम्पू काव्य के अध्ययन से विद्यार्थी काव्य की एक नवीन विधा एवं उसके विषयों को जान पायेंगे ।

द्वितीय प्रश्न पत्र - ऐच्छिक नाट्य एवं नाट्य शास्त्र

- विद्यार्थी नाटक के अध्ययन से नाटक के विषयों में ज्ञान प्राप्त कर पाएंगे।
- नाटक में निहित संदेशों से विद्यार्थी अच्छे आचरण से युक्त हो पाएंगे।
- नाट्य साहित्य के इतिहास के अध्ययन से छात्र-छात्राएं नाट्य साहित्य के आचार्यों के बारे में ज्ञान प्राप्त कर पाएंगे।
- नाट्य में निहित उपदेशों जैसे प्रकृति वर्णन, रस, छंद, अलंकार आदि का ज्ञान प्राप्त कर पाएंगे।

तृतीय प्रश्न पत्र - ऐच्छिक साहित्य शास्त्र

- विद्यार्थी साहित्यशास्त्र के अध्ययन से संस्कृत काव्य की विधाओं से परिचित हो सकेंगे ।
- साहित्यशास्त्र में निहित विषयों काव्यलक्षण , वाक्य निर्माण ,नाटक लक्षण आदि को समझ पायेंगे ।
- साहित्यशास्त्र के अध्ययन से छात्र-छात्राएं काव्यशास्त्र की पारिभाषिक शब्दावली को जान पाएंगे।

चतुर्थ प्रश्न पत्र - मौखिकी-ऐच्छिक प्रश्नपत्रों पर केन्द्रित

- मौखिकी प्रश्न पत्र के माध्यम से छात्र/छात्रायें वार्तालाप एवं वाचन जैसी क्रियाओं में दक्ष हो सकेंगे।
- छात्र-छात्राएं मौखिकी के माध्यम से अपने-अपने प्रश्न पत्रों में दक्षता को प्राप्त कर पाएंगे।