No. EDN- GCChowari Dated:
Office of the Principal, Govt. College ChowariChamba (HP)
Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com
Estd.: 1994

Criterion 1: Teaching Learning

1.2 Curriculum Planning and Implementation

This is to certify that during the academic session 2024-2025, the faculty of Govt. College Chowari:

1. Followed the teaching schedule (100%).
2. Defined learning outcomes (100%).
3. Adopted curriculum enrichment practices such as projects, visits, tours and surveys.
4. Implemented the internal assessment mechanism in all departments.
5. Communicated assessment/results to the students within 7 days.

This certificate is issued for SAR purpose.

Principal

(Signature and Seal)

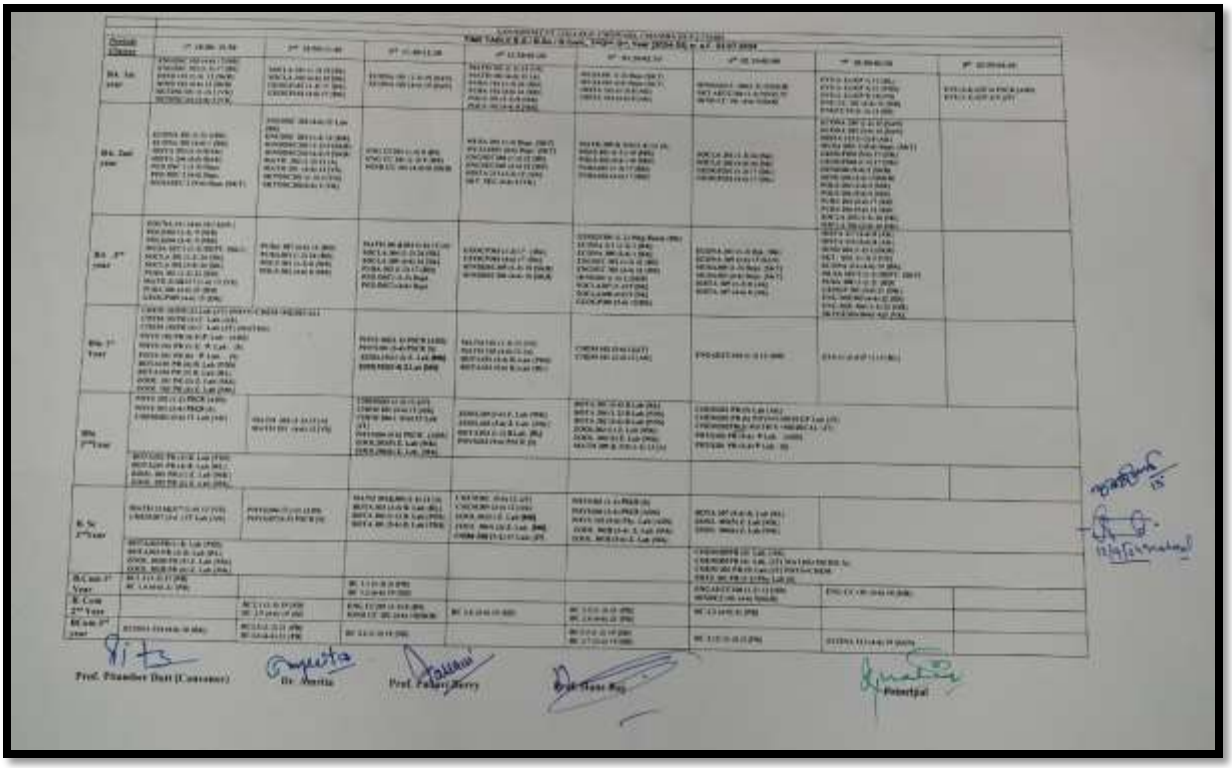
Principal
Govt. College
Chowari (Chamba) H.P
D.D.O. Code-207

Criterion 1: Teaching Learning

1.2 Curriculum Planning and Implementation

1.2.1 Teaching schedule

Time Table



Tentative Teaching plan: Botany
Session 2024-25

1st Year; DSC: Botany Paper I

Biodiversity (Microbes, Algae, Fungi and Archegoniates) (BOTA 101) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Microbes**	Viruses – Discovery, general structure, replication (general account), DNA virus (Tphage); Lytic and lysogenic cycle, RNA virus (TMV); Economic importance; Bacteria –Discovery, General characteristics and cell structure; Reproduction – vegetative, asexual and recombination (conjugation, transformation and transduction); Economic importance.	August	Lecture, ICT based
2	**Algae**	General characteristics; Ecology and distribution; Range of thallus organization and reproduction; Brief account of classification of algae; Morphology and life-cycles of the following: *Nostoc, Oedogonium, Vaucheria, Ectocarpus, Polysiphonia*. Economic importance of algae	August-September	Lecture, ICT based, Demonstration
3	**Fungi**	Introduction- General characteristics, ecology and significance, range of thallus organization, cell wall composition , nutrition, reproduction and classification; Morphology and life cycles of *Phytophthora, Rhizopus* (Zygomycota) *Penicillium,Venturia* (Ascomycota), *Puccinia, Agaricus* (Basidiomycota); Symbiotic Associations, Lichens: General account, reproduction and significance.	September-October	Lecture, ICT based, Demonstration
4	**Bryophytes**	General characteristics, adaptations to land habit, Range of thallus organization. Classification (up to family),	November	Lecture, ICT based, Demonstration

		morphology, anatomy and reproduction of *Marchantia*and *Funaria*. (Developmental details not to be included). Ecology and economic importance of bryophytes with special mention of *Sphagnum*.		
5	**Pteridophytes**	General characteristics, Early land plants (*Cooksonia* and*Rhynia*). Classification (up to family), morphology, anatomy and reproduction of *Selaginella*, *Equisetum* and *Adiantum*. (Developmental details not to be included). Heterospory and seed habit, stelar evolution. Ecological and economical importance.	February	Lecture, ICT based, Demonstration
6	**Gymnosperms**	General characteristics, Classification (up to family), Morphology, anatomy and Reproduction of *Cycas* and *Pinus* (Developmental details not to be included). Economic importance.	March	Lecture, ICT based, Demonstration

1st Year; DSC: BotanyPaper II

Plant Ecology and Taxonomy (BOTA 102) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Introduction** (2 Lecture)	Introduction to ecology, basic terminologies and ecology as synthetic discipline.	August	Lecture
2	**Ecological Factors** (13 Lectures)	Soil: Origin, formation, composition, soil profile. Water: States of water in the environment, precipitation types. Light and temperature, Shelford law of tolerance. General account of adaptations in xerophytes and hydrophytes.	August-September	Blended, Discussion
3	**Plant communities** (5 Lectures)	Characters; Ecotone and edge effect; Succession; Processes and types (Hydrosere and Xerosere)	September-October	Blended, Field study, Discussion, Flipped
4	**Ecosystem** (10 Lectures)	Structure; energy flow trophic organisation; Food chains and food webs, Ecological pyramids production and productivity; Biogeochemical cycling- Cycling of Nitrogen and Phosphoros.	October	Blended, Discussion, Flipped
5	**Introduction to plant taxonomy** (3 Lectures)	Identification, Classification, Nomenclature.	November	Lecture
6	**Identification** (5 Lectures)	Functions of Herbarium, important herbaria and botanical gardens of the world and India; Documentation: Flora, Keys: single access and	November-Decemember	Blended, Field study

		multi-access		
7	**Taxonomic evidences** (6 Lectures)	Taxonomic evidences from cytology, phytochemistry and molecular data.	November-Decemember	Lecture
8	**Taxonomic hierarchy** (2 Lectures)	Ranks, categories and taxonomic groups	December	Blended, Discussion
9	**Botanical nomenclature** (6 Lectures)	Principles and rules (ICN); ranks and names; binominal system, typification, author citation, valid publication, rejection of names, principle of priority and its limitations	February	Blended, Flipped
10	**Classification** (5 Lectures)	Types of classification-artificial, natural and phylogenetic. Bentham and Hooker (upto series), Engler and Prantl (upto series), Angiosperm Phylogeny Group (APG) - general introduction	February	Blended, Flipped
11	**Numerical taxonomy and cladistics** (3 Lectures)	Characters; variations; OTUs, character weighting and coding; cluster analysis; phenograms, cladograms (definitions and differences).	March	Lecture, Demonstration

2nd Year; DSC Botany –Paper III

Plant Anatomy and Embryology (BOTA 201) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Meristematic and permanent tissues** (7 Lectures)	Root and shoot apical meristems; Simple and complex tissues.	August	Blended, Discussion
2	**Organs** (7 Lectures)	Structure of dicot and monocot root stem and leaf.	August-September	Blended, Discussion
3	**Adaptive and protective systems** (4 Lectures)	Epidermis, cuticle, stomata;	September-October	Blended, Discussion
4	**Secondary Growth** (8Lectures)	Vascular cambium – structure and function, seasonal activity. Secondary growth in root and stem, Wood (heartwood and sapwood).	September-October	Blended, Discussion
5	**Anomalous Secondary Growth** (4 Lectures)	*Boerhaavia* (Dicot) and *Dracaena* (Monocot)	November	Blended, Discussion
6	**Structural organization of flower** (13 Lectures)	Flower- a modified shoot, Function of floral parts; Structure of anther and pollen; Microsporogenesis, Male gametophyte, Structure and types of ovules; megasporangium, Types of embryo sacs, organization and ultra-structure of mature embryo sac.	November-December	Flipped, Blended, Discussion

7	**Pollination** (4 Lectures)	Pollination mechanisms and adaptations.	February	Flipped, Field visit
8	**Fertilization** (7 Lectures)	Double fertilization; Seed-structure, appendages and dispersal mechanisms.	February	Blended, Discussion
9	**Embryo and endosperm** (6 Lectures)	Endosperm types, structure and functions; Dicot and monocot embryo; Embryo- endosperm relationship, polyembryony	March	Blended, Field visit, Discussion

2nd Year; DSC Botany –Paper IV

Plant Physiology and Metabolism (BOTA 202) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Introduction and Plant-water relations** (8 Lectures)	Applications of plant physiology in agriculture & horticulture. Importance of water, Diffusion. Osmosis, water potential and its components; Transpiration and its significance; Factors affecting transpiration; Root pressure and guttation, Mechanism of Stomatal movements.	November	Lecture, Demonstration
2	**Mineral nutrition** (8 Lectures)	Essential elements, macro and micronutrients; Criteria of essentiality of elements; Role of essential elements; Transport of ions across cell membrane, active and passive transport, carriers, channels and pumps.	September	ICT based, Demonstration
3	**Translocation in phloem** (4 Lectures)	Composition of phloem sap, girdling experiment; Pressure flow model; Phloem loading and unloading.	November	Blended, Demonstration
4	**Photosynthesis** (12 Lectures)	Photosynthetic Pigments (Chl a, b, xanthophylls, carotene); Photosystem I and II, reaction center, antenna molecules; Electron transport and mechanism of ATP synthesis; C3, C4 and CAM pathways of carbon fixation; Photorespiration.	October	Blended, Demonstration
5	**Respiration** (8 Lectures)	Glycolysis, anaerobic respiration, TCA cycle; Oxidative phosphorylation, Glyoxylate, Oxidative Pentose Phosphate Pathway.	October	Blended
6	**Enzymes** (4 Lectures)	Structure and properties; Mechanism of enzyme catalysis and enzyme inhibition.	February	Lecture, ICT based, Demonstration
7	**Nitrogen metabolism** (4 Lectures)	Biological nitrogen fixation; Nitrate and ammonia assimilation.	August	Blended, Demonstration
8	**Plant growth regulators** (6 Lectures)	Discovery and physiological roles of auxins, gibberellins, cytokinins, ABA, ethylene.	September	Blended

9	**Plant response to light and temperature** (6 Lectures)	Photoperiodism (SDP, LDP, Day neutral plants); Phytochrome (discovery and structure), red and far red light responses on photomorphogenesis; Vernalization. Practical applications of vernalization and photoperiodism	August	Blended, Demonstration

3rd Year; DSE Botany

Economic Botany and Biotechnology (BOTA 301) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Cultivated Plants** (3Lectures)	Introduction, Research centres, Concept of centres of origin, their importance with reference to Vavilov's work	August	Blended
2	**Cereals** (5 Lectures)	Wheat and Rice -Origin, morphology, uses	September	Blended, Demonstration
3	**Pulses & Vegetables** (4 Lectures)	General account with special reference to Gram , soybean and Potato	September	Blended, Demonstration
4	**Spices** (3 Lectures)	General account with special reference to clove, black pepper, cinnamon, Ginger and Turmeric (Botanical name, family, part used, morphology and uses)	October	Blended, Demonstration
5	**Beverages** (4 Lectures)	Tea and Coffee (morphology, processing, uses)	October	Blended, Demonstration
6	**Oils and Sugar** (4 Lectures)	General description with special reference to groundnut and sugarcane	October	Blended, Demonstration
7	**Fibre Yielding Plants** (4 Lectures)	General description with special reference to Cotton (Botanical name, family, partused, morphology and uses)	November	Blended, Demonstration
8	**Medicinal Plants** (3 Lecture)	Brief account of *Ocimum*, *Tinospora*, *Aloe*, *Rauvolfia*, *Emblica* and *Cathranthus*	November	Blended, Demonstration
9	**Introduction to Biotechnology** (15 Lectures)	Tissue culture techniques, Micropropagation; haploid production through androgenesis and gynogenesis; brief account of embryo & endosperm culture; Applications of plant tissue culture in agriculture, horticulture and forestry.	August	Blended
10	**Biotechnological Techniques** (15 Lectures)	Introduction to r-DNA, Cloning vehicles, Gene transfer techniques in plants, Transgenic plants, Agarose electrophoresis, Blotting techniques: Northern, Southern and Western Blotting, DNA Fingerprinting; Molecular DNA markers i.e. RAPD, RFLP, SNPs; DNA sequencing, PCR and Reverse Transcriptase-PCR. ELISA, Hybridoma and monoclonal an	February-March	Blended

		tibodies, ELISA and Immunodetection. Molecular diagnosis of human disease, Human gene Therapy.		

3rd Year; DSE Botany

Cell and Molecular Biology (BOTA 303) (Credits: Theory-4, Practicals-2)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Techniques in Biology** (8 Lectures)	Principles of microscopy; Light Microscopy; Phase contrast microscopy; Fluorescence microscopy; Electron microscopy (EM)- Scanning EM and Scanning Transmission EM (STEM); Sample ; X-ray diffraction analysis.	March	Demonstration
2	**Cell as a unit of Life** (2 Lectures)	The Cell Theory; Prokaryotic and eukaryotic cells; Cell size and shape; Eukaryotic Cell components.	August	Lecture
3	**Cell Organelles** (20 Lectures)	Mitochondria: Structure, marker enzymes, composition; Semiautonomous nature; Symbiont hypothesis; Proteins synthesized within mitochondria; mitochondrial DNA. Chloroplast Structure, marker enzymes, composition; semiautonomous nature, chloroplast DNA. ER, Golgi body & Lysosomes: Structures and roles. Peroxisomes and Glyoxisomes: Structures, composition, functions in animals and plants and biogenesis. Nucleus: Nuclear Envelope- structure of nuclear pore complex; chromatin; molecular organization, DNA packaging in eukaryotes, euchromatin and heterochromatin, nucleolus and ribosome structure (brief).	August-September	Lecture, Flipped, Discussion
4	**Cell Membrane and Cell Wall** (6 Lectures)	The functions of membranes; Models of membrane structure; The fluidity of membranes; Membrane proteins and their functions; Carbohydrates in the membrane; Faces of the membranes; Selective permeability of the membranes; Cell wall.	September-October	Blended
5	**Cell Cycle** (6 Lectures)	Overview of Cell cycle, Mitosis and Meiosis; Molecular controls.	November	Blended, Demonstration
6	**Genetic material** (6 Lectures)	DNA: Miescher to Watson and Crick- historic perspective, Griffith's and Avery's transformation experiments, Hershey-Chase bacteriophage experiment, DNA structure, types of DNA, types of genetic material, Replication in prokaryotes and eukaryotes, bidirectional replication, semi–conservative, semi discontinuous, R A priming, Ø theta mode of replication, replication of linear, ds-DNA, replication of end of linear chromosome including replication enzymes.	November-December	Flipped, Blended, Discussion
7	**Transcription (Prokaryotes and Eukaryotes)** (6 Lectures)	Types of structures of RNA (mRNA, tRNA, rRNA), RNA polymerase- various types; Translation (Prokaryotes and eukaryotes), genetic code.	February	Blended
8	**Regulation of gene expression** (6 Lectures)	Prokaryotes: Lac operon and Tryptophan operon; and in Eukaryotes.	March	Blended

2nd Year; SEC Botany

Biofertilizers (BOTA 203) (Credits 4)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Fertilizers** (5 Lectures)	Introduction, Types of fertilizers and their advantages and disadvantages, Brief account of microbes used as biofertilizer, Marketable forms of biofertilizers.	August	Lecture, Flipped
2	***Rhizobium*** (5 Lectures)	General account, Isolation, Identification, Mass multiplication, Carrier based inoculants, Application, Crop response	November	Flipped
3	**Actinorrhizal Symbiosis** (2 Lectures)	*Frankia*, Host-microsymbiont relationship, Isolation, Culture, Application and Advantages	October	Lecture, Tutorial
4	***Azospirillum*** (4 Lectures)	Isolation and mass multiplication, Carrier based inoculant, Crop response	October	Lecture, Tutorial
5	***Azotobacter*** (4 Lectures)	Characteristics, Isolation and mass multiplication, Application and Crop response.	September-October	Lecture, Tutorial
6	**Phosphate Solubilizing Organisms** (3 Lectures)	Introduction, Isolation, Culture and Applications.	December	Lecture, Tutorial
7	**Cyanobacteria (Blue Green Algae)** (6 Lectures)	*Azolla* and *Anabaena azollae* association, Nitrogen fixation, Factors affecting growth, Blue green algae and *Azolla* in rice cultivation.	October-November	Lecture, Tutorial
8	**Mycorrhizal Association** (6 Lectures)	Types of mycorrhizal association, Taxonomy, Occurrence and distribution, Phosphorus nutrition, Growth and yield; VAM – Isolation and inoculum production, Influence on growth and yield of crop plants.	September-October	Flipped, Lecture, Tutorial
9	**Organic Farming** (10 Lectures)	Green manuring and organic fertilizers, Recycling of biodegradable municipal, agricultural and Industrial wastes; Biocompost making methods, Types and method of vermicomposting, field Application.	August-September, February	Lecture, Tutorial, Demonstration

2nd Year; SEC Botany

Gardening and Floriculture (BOTA 204) (Credits 4)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Landscape Gardening and Floriculture** (6 Lectures)	Definitions of Landscape Gardening and Floriculture, history of gardening, importance, status and scope of Floriculture and Landscaping;	August	Lecture

		landscaping of homes, educational institutions, highways and public parks.		
2	**Gardening operations** (4 Lectures)	Soil laying, Manuring, Watering, Management of pests and diseases; Soil sterilization; Seed sowing; Pricking; Planting and transplanting; Shading; Stopping or pinching; Defoliation; Mulching; Pruning, Topiary making.	September	Lecture, Demonstration, Tutorial
3	**Garden Designs, Principles, Types and Features** (7 Lectures)	Principles and Elements of Garden Designs, Formal and Informal gardens, English, Mughal and Japanese gardens; Features of a garden (Garden wall, Fencing, Steps, Hedge, Edging, Lawn, Flower beds, Shrubbery, Borders, Rock garden, Water garden. Some Famous gardens of India.	September	Lecture, Tutorial
4	**Propagation of Garden Plants** (5 Lectures)	Sexual and vegetative methods of propagation; Role of plant growth regulators.	October	Lecture, Tutorial
5	**Ornamental Plants** (10 Lectures)	Flowering annuals; Herbaceous perennials; Shrubs, Climbers; Ornamental trees; Ornamental bulbous plants; Palms and Cycads; Potted plants and indoor gardening; Bonsai.	October	Lecture, Demonstration
6	**Commercial Floriculture** (9 Lectures)	Factors affecting growth and flower production of ornamentals; Cultivation of Important flower crops (*Carnation, Chrysanthemum, Gerbera, Gladiolus, Marigold, Rose, Lilium*)	November	Lecture, Demonstration, Tutorial
7	**Post Harvest Management** (4 lectures)	Post- harvest handling of important flower crops, methods to prolong vase life, packaging, storage and transport of flower crops, Flower arrangements and other floral crafts.	February-March	Lecture, Demonstration, Tutorial

3rd Year; SEC Botany

Medicinal Botany and Ethnobotany (BOTA 306) (Credits 4)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Traditional Systems of Medicine** (5 Lectures)	Brief history of use of medicinal herbs; Introduction to indigenous systems of medicines- Ayurveda, Unani and Siddha system of medicine.	August	Lecture
2	**Ethnobotany** (5 Lectures)	Introduction, concept, scope and objectives; Ethnobotany as an interdisciplinary science. The relevance of ethnobotany in the present context; Major and minor ethnic groups or Tribals of India, and their life styles.	August-September	Lecture, Tutorial
3	**Plants Used by the Tribals** (4 Lectures)	a) Food plants b) intoxicants and beverages c) Resins and oils and miscellaneous uses. d Sacred plants	September	Lecture, Tutorial

4	**Methodology of Ethnobotanical Studies** (7 Lectures)	a) Field work b) Herbarium c) Ancient Literature d) Archaeological findings e) temples and sacred places.	October	Lecture, Tutorial
5	**Role of ethnobotany in modern Medicine** (13 Lectures)	Medico-ethnobotanical sources in India; Significance of the following plants in ethno botanical practices (along with their habitat and morphology) a) *Azadirachta indica* b) *Ocimum sanctum* c) *Vitex negundo* d) *Gloriosa superba* e) *Tribulus terrestris* f) *Pongamia pinnata* g) *Cassia auriculata* h) *Indigofera tinctoria*. Role of ethnobotany in modern medicine with special example *Rauvolfia sepentina, Taxus wallichiana, Trichopus zeylanicus*, *Artemisia*, *Withania*.	October-November	Lecture, Tutorial, Demonstration
6	**Role of Ethnic groups in conservation** (3 Lectures)	Role of ethnic groups in conservation of plant genetic resources. Endangered taxa and forest management (participatory forest management).	November	Lecture, Tutorial
7	**Ethnobotany and Legal Aspects** (8 Lectures)	Ethnobotany as a tool to protect interests of ethnic groups. Sharing of wealth concept with few examples from India. Biopiracy, Intellectual Property Rights and Traditional Knowledge.	February-March	Lecture, Tutorial

3rd Year; SEC Botany

Mushroom Cultivation Technology (BOTA 307) (Credits 4)

Unit	Title	Topics covered	Month	Method of Teaching
1	**Introduction, edible and poisonous mushroom** (10 Lectures)	Introduction, history. Nutritional and medicinal value of edible mushrooms; Nutrition and nutraceuticals – Proteins, amino acids, mineral elements nutrition, carbohydrates, crude fibre content, vitamins; Poisonous mushrooms.	August-September	Lecture, Tutorial
2	**Cultivation Technology** (12 Lectures)	Infrastructure: substrates (locally available) Polythene bag, vessels, Inoculation hook, inoculation loop, low cost stove, sieves, culture rack, mushroom unit (Thatched house) water sprayer, tray, small polythene bag. Pure culture: Medium, Sterilization, Preparation of spawn, Multiplication.	October	Lecture, Tutorial
3	**Cultivation practices, composting technology and mushroom bed**	Cultivation practices of *Agaricus bisporus, Pleurotus* sp. and *Volvoriella volvacea*. Composting technology in mushroom production, Low cost technology, Mushroom bed preparation -	November	Lecture, Tutorial

	preparation (12 Lectures)	paddy straw, sugarcane trash, maize straw, banana leaves. Factors affecting the mushroom bed preparation.		
4	**Storage of mushrooms** (4 Lectures)	Short-term storage (Refrigeration - upto 24 hours) Long termStorage (canning, pickels, papads), drying, storage in salt solutions.	December	Lecture, Seminar, Tutorial
5	**Food Preparation** (4 Lectures)	Types of foods prepared from mushroom. Research Centres -National level and Regional level. Cost benefit ratio - Marketing in India and abroad, Export Value.	February	Lecture, Seminar, Tutorial
6	**Diseases and Pests of Mushrooms** (3 Lectures)	Bacterial, Viral and Fungal diseases of Mushrooms, Pest of Mushrooms.	March	Lecture, Tutorial

1.2.2 Learning Outcome

B.Com (Pass Course): Three year Programme

Basic Structure: Distribution of courses			
1	Ability –Enhancement Compulsory Course (AECC)	2 Papers of 4 Credit Hrs. each (2x4)	8
2	Skill- Enhancement Elective Course (SEC)	4 Papers of 4 Credit Hrs. each (4x4)	16
3	Core Course	12 Papers of 6 Cr. Hrs. each (12x6)	72
4	Discipline Specific Elective (DSE)	4 Papers of 6 Credit Hrs. each (4x6)	24
5	Generic Elective (GE)	2 Papers of 6 Credit Hrs. each (2x6)	12
	Total Credit Hours		132

B.com Programme Outcome

Bachelor of commerce is an undergraduate programme for studies in the various subjects of commerce, management and finance. This course allows students to obtain knowledge and skills required to manage and handle various accounting and financial management activities across various forms of business organisations. This course emphasise on subjects like Business law, company law, income tax laws, business statistics and mathematics, financial, corporate and management accounting, corporate governance and auditing etc. This course also emphasise on developing the analytical skills of students, which help the students well versed in the field of financial accounting, to prepare, interpret and analyse financial statements for the purpose of taking decisions. The contents of each course help students to prepare themselves with knowledge and skills to make them industry ready and induce entrepreneurial and innovative skills. Students will get practical skills to work as accountant, audit assistant, tax consultant, computer operator, bank manager, teacher, professor and so on. They will also be able to go into higher education and can make research in the field of finance, management and commerce.

Course outcome

B.Com	Paper Code Subject / Course Type	Course outcome
B.Com 1st Year	Environmental studies AECC-1	
	B.C 1.1 Financial Accounting Core Course C-1	**On completion of the course, the student will be able to** 1. Acquire knowledge in accounting; understand various principles and concepts of accountancy, system of maintenance of accounts, journal, ledger and different types of subsidiary books. 2. Familiarise with the concept of accounting equation, types of accounts, golden rules of accounting, trial balance, get expertise in preparing and maintaining books of accounts and final accounts. 3. Prepare depreciation accounts,preparation of accounts using various methods of depreciation, hire purchase, Consignment accounts, branch accounts and partnership accounts 4. Gain knowledge and practical applicability of accounting. 5. Be aware of accounting Package like Tally.
	B.C 1.2	**On completion of the course the student will be able to.**

	Business Organisation & Management Core Course C-2	1. learn foundation of Indian business, various sectors of the economy, liberalisation and "Make in India' 2. Understand about the organisation and management of business enterprise, forms of various business organisations & choice of form of organisation. 3. Gain knowledge about management-: its functions, process and types. The Gita and Management & Gandhian Philosophy. 4. Understand the theories, concepts & styles of leadership and motivation 5. Understand marketing management, practices and policies of financial management and human resource Management & Role of SEBI in business.
	English 1 Core Course C-3	
	B.C 1.3 Business Law Core Course C-4	**On completion of the course the student will be able to.** 1. Acquire knowledge in Law with reference to Contract Act 1872, elements & types of contract. Develop the application skills relating to Formation of a contract, Discharge of contract & Remedies for breach of contract, contingent contracts and quasi contracts. 2. Understand about the contracts of Indemnity and guarantee, Bailment, Pledge & agency; duties and rights of an agent, Bailer, Bailee, Surety etc. 3. Gain knowledge about the contract of sale of Goods Act, 1930, Conditions and Warranties, transfer of ownership in goods, performance of contract of sale, unpaid seller and their rights. 4. Understand meaning, characteristics and types of negotiable instruments, Parties to negotiable instruments, endorsement, crossing and bouncing of cheques. 5. Be familiar with the Partnership Act 1932, nature, characteristics, features, right and duties of Partner, Mode of dissolution. The limited Liability Partnership Act, 2008.
	B.C 1.4 Business Statistics & Mathematics	**On completion of the course the student will be able to.** 1. Understand Uni-Variate Analysis, introduction to statistics meaning and concepts, collection tabulation and presentation of data. 2. Solve problems based on measures of central tendency, measures of dispersion, variation and standard deviation. 3. Calculate numerical on Bi-variate analysis, simple linear Correlation and Regression analysis. 4. Gain knowledge about Time Series & Index Numbers. They will be able to apply statistical methods for estimating trend on time series, and testing of index number in business problems. They can estimate trend of time series and predict values by moving averages and least square method. They will be able to calculate change in the level of prices and quantities of commodities by suitable index number. 5. Understand matrices, its meaning, type, calculation and application. They can also learn simple and compound interest. Concepts of nominal effective rate of interest.
B.Com 2nd Year	**BC 2.1 Company Law Core Course C-7**	**On completion of the course the student will be able to.** 1. Acquire the basic knowledge on important terms and registration procedures of company according to companies' act 2013. 2. Understand the concept of Memorandum of Association, Articles of Association, Prospectus, Doctrine of Indoor Management, Doctrine of Ultra-vires, and various other documents required to register the company. They will gain confidence to start up a new company in the modern era.

		3. Learn about various types of directors, the remuneration, role, duties, qualification, disqualification appointment, removal, powers and liabilities of Directors. Legal procedures to hold Meetings of shareholders and boards & corporate social responsibility. 4. Understand provisions relating to payment of dividend, books of accounts and audit. 5. Be familiar with the meaning, concepts & modes of winding up, Insider trading and whistle blowing.
	BC 2.2 **Income tax Law & Practice** **Core Course C- 8**	**On completion of the course the student will be able to.** 1. Understand about some concepts & basic terms of Income Tax Act 1961. They will be aware of Scope of Total Income, residential status of persons and Exempted income under section 10. 2. Understand the provisions and procedure to compute total income under five heads of income i.e. salaries, house property, profits & gains from business & profession, capital gains and other sources. 3. Gain practical knowledge in computing tax liability for different types of assesses. Understand some specific deductions to be made from gross total income U/s 80-C to 80-U in computing total income & for computation of income tax for an individual. Analyse and apply the permissible exemptions and deductions from income under Income tax Act. 4. Familiarize and the filing of Income tax returns: manually and on-line.
	English II **Core Course C- 9**	
	BC 2.3 **Computer application in Business** **SEC- 1**	**On completion of the course the student will be able to.** 1. Learn basic computer skills and knowledge, 2. Create and edit document using Word Processing. 3. Create and edit slides using Power point Presentation 4. Create and manage Worksheet, handling various formula, charts and graphs. 5. Creating business Spreadsheets.
	BC 2.4 **Corporate Accounting**	**On completion of the course the student will be able to.** 1. Learn about issue, forfeiture and reissue of forfeited shares. Understand the various types of shares and debentures, legal procedure for redemption or repayment of preference shares & debentures. 2. Prepare profit and loss account and balance sheet of corporate entities. 3. Calculate the valuation of goodwill and shares. 4. Learn about concepts and accounting treatment relating to amalgamation of companies. Acquire knowledge relating to holding and subsidiary company and preparing accounts thereof 5. Know about banking and non banking companies, their asset structure, non-performing assets and cash flow statement.
	BC 2.5 **Cost accounting** **Core Course C-12**	**On completion of the course the student will be able to.** **1.** Acquire the basic knowledge on concepts, elements, objectives, scope and classification of cost accounting. Develop the application skill in drafting a cost sheet and role of cost accountant in an organisation. **2.** Understand Material control techniques & methods of valuing material. Learner also gets idea about the procedure in procurement of material, issue, store, documentation, valuation of material, techniques applied in inventory control & Need for material control **3.** Analyse the various system of wage payment, control of idle time of labour & methods of calculation of labour turnover. Learner gets basic idea of Payroll procedure, overtime, charging of labour cost to various cost centres and various incentive schemes to labourers.

		4. Get idea of various types of overheads, classification of overheads and how to apportion primary and secondary overheads to various cost centres. Activity based costing and service costing. **5.** Learn about job costing, Treatment of profits in Contract costs and process costing. Evaluate the process losses, wastage, and scrap, normal and abnormal losses. To which industry these techniques are applicable.
	BC 2.6 **E- Commerce** **SEC-2**	**On completion of the course the student will be able to.** 1. Learn meaning nature, concept and reasons for transacting online. Types of E-Commerce business models, Internet and data security. 2. Understand about E- Commerce security environment, IT Act 2000, digital signature, E-Governance and Cyber Crime. 3. Learn about models and methods of E-Payment, Gain practical knowledge in the process of electronic payments, emerging client server security threats, and technology behind the web. Payment gateways, online banking and risk involved in e-payments. 4. Understand meaning, purpose, advantage, disadvantage of transacting online & various online services 5. Acquire the basic knowledge of website designing and E- business management.
B.Com IIIrd Year	**B.C 3.1 (c)** **Fundamentals of Financial Management DSE-1**	**On completion of the course the student will be able to.** 1. Acquire knowledge on the term finance, financial management, time value of money and risk &return associated with financial activities. 2. Take investment decisions & selection of asset to be invested in, by using payback period method, rate of return, net present value, and internal rate of return and profitability index method. 3. Get familiar with financing decisions by understanding various sources of finance and their costs. Leverage and degree of leverage, capital structure and theories of capital structure, 4. Understand dividend decisions, dividend distribution or reinvestment decisions, theories for relevance and irrelevance of dividend decisions. 5. Learn about working capital decisions, sources of short term finance, working capital estimation. They can also understand cash, receivables, inventory and payable management.
	B.C 3.2 (a) **Corporate Governance & Auditing**	**On completion of the course the student will be able to.** 1. Articulate knowledge of corporate governance, framework of corporate governance in India, basic theories, models &major corporate scandals. 2. Understand business ethics, Theories and codes of ethics, ethics in various functional areas of business. 3. Learn about Concept of corporate social responsibility, CSR provisions under the companies' act 2013. CSR Committees, models and standards. Rating agencies, green governance and concept of whistle blower. 4. Learn about basic audit concepts, principles. Procedures and techniques, legal framework under which Indian company audits are conducted 5. Understand the way to develop the analytical skills in conducting audit, rules regarding appointment and removal of auditor rights and duties of auditor. They will also be able to prepare audit report.
	B.C 3.3 **Entrepreneurship SEC-3**	**On completion of the course the student will be able to.** 1. Acquire the fundamental knowledge of entrepreneurs & entrepreneurship. 2. Learn about micro, medium and small enterprises, selection of project, finance and industries. Business houses and family business in India 3. Get familiar with Requirement, availability and access to finance. Financial and technical assistance to set up an enterprise 4. Know the sources, significance and component of writing business plan.

		5. Get resources and make preliminary contracts for setting up a business.
	ECONA 313 Economy of Himachal Pradesh GE 1	
	BC 3.5 (c) Management Accounting DSE-3	**On completion of the course the student will be able to.** 1. Acquire the knowledge in management accounting in the aspects of scope, objectives, characteristics, functions, significance & limitations. Familiarize and understand the difference between financial and cost accounting versus management accounting & ratio analysis. 2. Understand meaning, application, advantage and limitation of Marginal costing. Know about use of Marginal costing in Managerial decision. Develop the application skill to compute contribution, P/V ratio, break even sales and margin of safety in the process of decision-making. 3. Make decisions regarding profitable product mix, acceptance and rejection decision, make or buy a product and various methods of pricing of product. 4. Understand budget, budgeting and budgetary control. Prepare different types of budgets & zero base budgeting. 5. Learner get understanding of Introduction to Standard Costing, various types of standard, standard setting process, and various types of variances & Its application in Managerial decisions.
	B.C 3.6 (c) Fundamentals of Investment DSE-4	**On completion of the course the student will be able to.** 1. Understand the investment environment, investment process, type of Indian securities market. Concept of risk and return. 2. Get knowledge about fixed income securities such as bond, their type, valuation and risk associated with them & working of Credit rating agencies. 3. Select security for investment by conducting fundamental, technical analysis. Understand efficient market hypothesis, dividend capitalisation and equity valuation. 4. Understand portfolio creation by using diversification, basic principles to construct a portfolio. Derivative market and various derivatives. 5. Understand about role of SEBI and stock exchanges in investor protection. Insider trading and investor's awareness.
	B.C 3.7 Personal Selling & Salesmanship SEC-4	**On completion of the course the student will be able to.** 1. Analyse an overview of personal selling, functions of a sales person, characteristics of a sales person, sales as a career, importance and role of personal selling. 2. Understand buying motives of buyers, motivation factors and theories of motivations. 3. Understand about selling process-: need, methods and process, closing sales and post sale activities. 4. Prepare sales reports, different types of reports and documents required to complete a sale process. Ethical aspects of selling. 5. Know about AIDA model of selling, various distribution networks, and role of advertisement in personal selling.
	ECONA 314 INDIAN ECONOMY GE 2	

Programme Outcome

BA Economics

BA in Economics is intended to develop broader understating among the students about how the world is functioning in terms of economic matters. Apart from this the programme helps the students in diverse forms as mentioned below:

1. Guide students in decision making in personal financial matters.
2. Helps in management of economic affairs of life.
3. Develop understanding about functioning of an economy of a family, society, state, country and the world.
4. Provides opportunities for getting jobs in both private and Govt. sector.
5. Motivate and helps in doing own business.
6. Develops skills among the students to live better life.
7. Develops rational and creative thinking.
8. Helps in scientific thinking about economic affairs along with life in general.

Course Outcome

BA 1st Year		
Sr. No.	Name of the course and code	learning outcome of the course
1.	Principals of Microeconomics-1 (ECONA101)	❖ Emphasises the relevance of Microeconomics as a branch of Economics to the students ❖ Helps to understand how an economic agent makes economic decision pertaining to economic activities such as consumption and production so as to maximise own purpose. ❖ Teaches the economic agents to be rational in economic decision making. ❖ Develop an understanding about the relevance of various economic activities and economic agents.
2.	Principals of Microeconomics-2 (ECONA102)	❖ This course primarily focuses on the various forms of market and guide the students to be a rational participant both as a demand side and supply side agent. ❖ The distribution plays an important role in the betterment of an economy which is taught in this course. ❖ Connects Microeconomics to the real life situations.
BA 2nd Year		
1.	Principals of Macroeconomics-1 (ECONA201)	❖ Describes all the concepts ascribed to national income. ❖ This course makes students aware about various variables of an economy such as investment, saving and money.

		❖ Focuses on classical and Keynesian Economics and helps the students to compare both school of thoughts. ❖ Tells the process of control of money supply in the Economy. ❖ Connects macroeconomics to real life situations.
2.	Principals of Macroeconomics-2 (ECONA202)	❖ Concentrates on macroeconomic variables as inflation, unemployment and exchange rate. ❖ Makes students familiar with concepts like multiplier and accelerator. ❖ Improves the understanding of the students about balance of payments in comprehensive manner.
3.	Statistical Methods-1 (ECONA203)	❖ Basic understanding of statistics is indispensable for the students of Economics which is imparted by this course. ❖ This course sharpens the skills of students for collecting, analysing and interpreting data related to univariate analysis. ❖ Connects real life to statistics.
4.	Statistical Methods-2 (ECONA205)	❖ This course deals with bivariate analysis and helps students to make understating of such tools. ❖ Connects all mentioned loots to real life situations. ❖ Improves logical thinking.
BA 3rd Year		
1.	**Indian Economy (ECONA301)**	❖ This course made students aware about wide range of components of Indian Economy varying from history and current situation of the economy along with possible future prospects. ❖ Improves general knowledge of the students of Indian Economy. ❖ Provides an opportunity to develop own perspectives on Indian Economy.
2.	**Development Economics (ECONA305)**	❖ Development Economics teaches the discourse of economic development along with describing various concepts ascribed to development. ❖ This facilitates the learners about several theories and ideas given by renowned development economists belonging to different countries. ❖ Provides space for the students to develop own developmental ideology.
3.	**Research Methodology (ECONA309)**	❖ Describe the relevance of research in the generation of knowledge and problem solving. ❖ Imparts basic knowledge about research to the students. ❖ Develop basic understanding of research and helps the

		students to conduct research. S
4.	**Money and Banking (ECONA311)**	❖ Aware students about the evolution of money up to the current form and presents the possibilities in future. ❖ Empathises the role money plays in the modern word. ❖ Teaches the history and current role of banking system in the modern times. ❖ Makes students aware about various policies that respective governments undertook to regulate the monetary system of the economy.
5.	**Economy of HP (ECONA313)**	❖ The course, economy of Himachal Pradesh teaches the students about past, present and expected future of Economy of Himachal Pradesh. ❖ Helps the students to develop own perspective on economy of the state. ❖ Improves general knowledge of the students about Himachal Pradesh.
6.	**Indian Economy (ECONA314)**	❖ This course made students aware about wide range of components of Indian Economy varying from history and current situation of the economy along with possible future prospects. ❖ Improves general knowledge of the students of Indian Economy. ❖ Provides an opportunity to develop own perspectives on Indian Economy.

Programme/Course Learning Outcome
Department of History, Session: 2024-25

Sr. No	Course Type	Course Name	Course code	Year	Course Outcome
1	DSC-I	History of India from theEarliestTim esupto 300 CE	DSC-1A:HIST(A) 101	First	Students will acquire knowledge regarding the primitive life and cultural status of the people of ancient India. They can gather knowledge about the society, culture, religion and political history of ancient India. They will also acquire the knowledge of changing socio-cultural scenarios of India. As a history student will learn about the historiographical trends and interpretation of the historical sources of ancient India as well. They can acquire knowledge about the Vedic Period and the rise of Jainism and Buddhism culture in Ancient times of India.
2	DSC-II	HistoryofIndiaf romC 300 to 1206	DSC-1B:HIST(A) 102	First	In this course students will learn and analyze about the transition from historic centuries to theearlymedieval.They'llbeabletodelineate changes in the realm of polity and culture; puranic religion; the growth of vernacular languages and newer forms of art and architecture. The mainemphaseswill beonthe society, economy and polity of Gupta, Chola, PallavaandVardhandynasties.Learnerwillalso know about the early invasions of Muslims in India.
3	DSC-III	HistoryofIndiaf romC 1206 up to 1707	DSC-1C:HIST(A) 203	Second	Students will be able to identify the major political developments in the History of India during the period between the twelfth and the seventeenth century. Learner will get to know the various developments during the Delhi Sulanate andd Mughal Empire.Outline the changes and continuities in the field of culture, especiallywithregardtoart,architecture,bhakti movement and sufi movement. Delineate the development of trade and urban complexes duringthis period.

4	DSC-IV	HistoryofIndiafromC 1707 up to 1950	DSC-1D:HIST(A) 204	Second	The students will be able to know the decline of Mughlas and trace the British Colonial expansion in the political contexts of eighteenth century India. They will learn about the changes in society,politics,religionandeconomyduringthis period. They'll also acquire knowledge about the freedom struggle. The contents of the syllabus are designed to cover core issues pertaining to vast canvass of nationalist history so that the student at the under graduate level is equipped to focus upon the core ideas of national movementinitscontextuality.India'squestfor independence and nation building are interwoven script of history, debated most widely at global level with various angles. Indeed,India'snationalmovementhasvastand divergent ideological base with inner contradictions.
5	SEC-I	HistoricalTourism	SEC-1A:HIST (A)213	Second	InthisskillenhancecoursestudentswillbeabletoHistoricalsitesofIndiaandtheVariousmeansandmodesoftourism.
6	SEC-III	AnIntroductionto Archeology	SEC-2A:HIST(A) 215	Second	Students will get to understand the different facets of Archaeology and their significance. They also understand about the legal and institutional frameworks for protection archaeologicalsitesinIndiaasthechallenges facing it.
7	DSE-I	Modern and Contemporary Word	DSE-1A:HIST(A) 305	Third	Thestudentswillbeabletoanalyzethehistorical developmentsinEurope,between1789-1919.As

		HistoryI:1871-1919			it focuses on the democratic & socialist foundationsofmodernEurope.Theywillbe able to situate historical developments of socialist upsurge & the economic forces of the wars, otherideologicalshifts.
8	DSE-II	Modern and ContemporaryWord HistoryII:1919-1992	DSE-1B:HIST(A) 307	Third	This course aims to provide an understanding of an era of shifting history from Euro centric to World. It discusses the turbulent times when totalitarianism rose as an alternative to democraticandliberalidealandalsothegrowing desire for peace through formation of organizationssuchasUnitednations.
9	SEC-V	IndianHistoryand Culture	SEC-3:HIST(A)317	Third	This course enables students to explore various aspectsofculturalheritageandculturaldiversity inhistoricalperspectivethatdiscussesnumerous cultural practices that have evolved over centuries. They will acquire knowledge of changing socio-cultural scenarios of India. As well as they can gather knowledge about the cultural heritage, cultural forms and cultural expressions performing arts, fairs and festivals..
10	SEC-VII	IntroductiontoIndian Art	SEC-4:HIST(A)319	Third	Students will learn about the Indian art, from ancient to contemporary times, in order to understand and appreciate its diversity and its aesthetic richness. As well as students will equip withtheabilitytounderstandartasamediumof culturalexpression.
11	GE-II	Socio-ReligiousReform Movements in India (19^{th} and 20^{th} centuries)	GE-2:HIST(A)311	Third	This course will enable the students about the Socio-ReligiousReformMovementsinIndiatook placeduring 19^{th} and 20^{th} centuries and their impactonthenationalmovement.

12	GE-IV	HistoryofHimachal Pradesh1815-1972	GE-2:HIST(A)312	Third	StudentswilllearnaboutthehistoryofHimachal Pradesh between 1815-1972. Penetration of Britishers in the Hills and the administrative policies and developments of during the period. Learner will get to know the native resistance to Colonial rule and the post independence developments as well formation of Himachal Pradesh.

PROGRAM OUTCOME: GEOGRAPHY

The primary focus of geography is on changes in spatial characteristics over time. It emphasizes both qualitative and quantitative geographical investigations and highlights the interaction between humans and the environment. After completing B.A. Programme in Geography, students will be having fundamental geographic knowledge.

Knowledge outcomes:

- An in-depth understanding of the scope and evolution of the **diverse discipline of Geography**, where students acquire knowledge of all physical and cultural features of the earth.
- Know the basic concepts and terminologies used in Geography like **interior of the earth, plate tectonic, sea floor spreading, population growth, disasters, composition and structure of atmosphere, hydrosphere, etc.**
- Enhance understanding on the causes and effects of local, national and international problems like **global warming, acid rain, ozone depletion, soil degradation, deforestation etc.** Additionally, a sense of environmental ethics is inculcated among students that focus research and concerns on sustainability.
- Sensitization and awareness about the **hazards and disasters** to which the subcontinent is vulnerable; and their management.
- Analyzing the differential patterns of the **human habitation of the Earth**, through studies of **human settlements and population dynamics**. Understanding and

accounting for regional disparities, poverty, unemployment and the impacts of globalization.

Skill outcomes:

- Carry out surveying and learn the **art of map making** and prepare maps for the areas with the help of surveying techniques.
- Gain knowledge of **quantitative methods** and their ability to use statistical and cartographical methods to solve geographical problems. Acquire an understanding of **quantitative techniques** and their capacity to address geographic issues.
- Gain understanding on **primary and secondary data** during the field survey, that is later incorporated in the field report. Field survey leads to developing effective communications skills and fostering cooperation among students enabling them to connect and contribute towards **teamwork activities.**
- Gain understanding on various **statistical methods and cartographic techniques**.
- Training in practical techniques of mapping, cartography, software, interpretation of maps, photographs and images etc; enable students to comprehend the spatial variation of phenomena on the Earth's surface easily.

COURSE OUTCOME: GEOGRAPHY

BA 1st Year
Courses Offered:

1. Physical Geography
2. General Cartography

1.	**Physical Geography** (GEOGP 101 CC)	• Acquire knowledge about Earth's interior. • Understand the elements of weather and climate, different atmospheric phenomena and climate change. • Analyse the concepts of Hydrology and Oceanography. • Comprehend the characteristics of global oceans.
2.	**General Cartography**	• Understand the basic map making and art of distinguishing various maps.

	(GEOGP 102 CC)	• Gain the understanding of scale needed for drawing any map. • Gain knowledge of various map projections, their properties and several associated techniques.

BA 2nd Year
Courses Offered:

1. Human Geography
2. Environmental Geography
3. Regional Planning and Development
4. Remote sensing and GPS

3.	**Human Geography** (GEOGP 201 CC)	• Gain knowledge about the history and evolution of humans. • Understand the various habitat and adaption patterns, as well as the methods and procedures used in human geography • Form a notion of society and space. • Understand patterns and processes of population growth, distribution, migration and human settlements.
4.	**Environmental Geography** (GEOGP 202 CC)	• Gain knowledge about concept, scope of environmental geography and components and functions of environment. • Develop an idea about human-environment relationships through various approaches. • Acquire an understanding to various environmental Problems, their Causes, Impacts and Management. • Gain knowledge about different environmental policies and programs.
5.	**Regional Planning and Development** (GEOGP 203 SEC)	• Know about the Concept, Need, Types and Characteristics of Regional Planning. • Acquire an understanding on the Concept of Hill Region, its Physical and Cultural aspects.

		• Get insights into the models developed for a planning region. • Gain knowledge of the regional development initiatives by focussing on case studies.
6.	**Remote Sensing and GPS** (GEOGP 204 SEC)	• Acquire understanding on basic Remote Sensing, its historical development, various platforms and Types. • Gain knowledge about Aerial Photography, its Principles, Types and Geometry. • Understand the concept of satellite Remote Sensing. • Develop an idea about interpretation and application of remote sensing and GPS.

BA 3rdYear
Courses Offered:

1. Geographic Information System
2. Field Techniques and Survey based Project Report
3. Geography of India
4. Disaster Management
5. Disaster Risk Reduction
6. Sustainability and Development

7.	**Geographic Information System** (GEOGP 301 SEC)	• Understand the meaning, Components and Scope of GIS. • Know about the GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure. • Gain understanding on concept of Georeferencing, Editing and attribute data integration. • Know the process of Georeferencing, Subsetting, Extraction of Land Use/Land Cover layers of any area and thematic mapping.
8.	**Field Techniques & Survey Based Project Report** (GEOGP 302 SEC)	• Learn the significance of field work in geographical studies. • Know about different types of field techniques. • Acquire understanding on primary and secondary data that is incorporated in the field survey.

		• Comprehend the survey procedure and techniques of creating a field report.
9.	**Geography of India** (GEOGP 303-1DSE)	• Understand the varied physiography of India. • Comprehend the demographic aspects in India. • Understand the settlement structure in India. • Get insights into the spatial distribution of resources in India.
10.	**Disaster Management** (GEOGP 304-1DSE)	• Understand the nature of hazards and disasters. • Develop an idea about factors, consequences and management of earthquake, landslide and cyclones. • Develop an understanding on human induced disasters, their causes, impacts and distribution. • Acquire an understanding on mitigation and preparedness to disasters.
11.	**Disaster Risk Reduction** (GEOGP 305-GEI)	• Understand the nature of hazards and disasters. • Acquire understanding on disasters in India, their causes, impacts and distribution. • Develop an understanding on human induced disasters, their causes, impacts and distribution and mapping of those zones. • Know the Do's and Don'ts during disasters, and steps to mitigate the impact of disasters.
12.	**Sustainability and Development** (GEOGP 306-GE2)	• Know the concept of Sustainability, its components. • Understand the Concept and Components of Millennium Development Goals. • Acquire understanding on Inclusive Development and its aspects including Education and Health in achieving sustainability. • Know about the Sustainable Development Policies and Programmes.

LEARNI NG OUTCOMES

B.A./B.Sc. Mathematics 1st Year

DIFFERENTIAL CALCULUS
MATH101TH

After studying this course, the students will be able to do the following:

- Find the limit of functions of one and several variables using epsilon-delta definition.
- Explain the concept of continuity of functions of one and several variables using epsilon-delta definition.
- Find the different type of discontinuities arising in functions.
- Find the h^{th} derivative of functions.
- Solve questions related to Leibnitz's Theorem, Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy's Mean Value Theorem and Taylor's Theorem.
- Explain the concept of concavity, convexity, singular points, Radius and Centre of curvature.
- Convert Cartesian coordinates into polar coordinates and vice-versa.
- Find the Maxima and minima of functions of two variables and Jacobian of functions up to three variables.

DIFFERENTIAL EQUATIONS
MATH102TH

After the completion of the course, Students will be able to

1. Classifies the differential equations with respect to their order and linearity.
2. Explains the meaning of solution of a differential equation.
3. Expresses the existence-uniqueness theorem of differential equations.
4. Solve first order differential equations utilizing the standard techniques for separable, exact, linear, homogeneous cases
5. Converts separable and homogeneous equations to exact differential equations by integrating factors.
6. Will be able to find solution of higher-order linear differential equations. And expresses the basic existence theorem.
7. Student will be able to find the complete solution of a non-homogeneous differential equation as a linear combination of the complementary function and a particular solution.
8. Applies the method of undetermined coefficients to solve the non-homogeneous linear differential equations with constant coefficients.
9. Uses the method "variations of parameters" to find to solution of higher-order linear differential equations with variable coefficients.
10. Solves the Cauchy-Euler and Legendre's equations.
11. Solve simultaneous differential equations and total differential equations.
12. Define the order and degree of partial differential equations, concept of linear and non-linear partial differential equations.
13. Solve the partial differential equations by removing arbitrary constants and arbitrary functions.

14. Understand and apply Lagrange's Method to solve partial differential equations.
15. Classify partial differential equations.

B.A./B.Sc. Mathematics 2nd Year

REAL ANALYSIS
MATH201TH

After studying this course, the students will be able to do the following:

- Explain the concept of real line, bounded sets and their supremum and infimum.
- Explain the Completeness property and Archimedean property of real line.
- Define real sequences and use of different tests to check their convergence.
- Define infinite real series and use of different tests to check their convergence.
- Define sequence and series of functions and use of different tests to check their convergence.

ALGEBRA
MATH202TH

After the completion of the course, Students will be able to understand

1. **the concepts of group and subgroup, their properties give illustrative examples.**
2. **the concept of centre of group, cyclic groups, commutator subgroup, index of a subgroup.**
3. **Order of a group and order of an element and Lagrange's theorem.**
4. **Cosets, normal subgroups and quotient groups.**
5. **homomorphism and isomorphism of groups and various fundamental theorems of homomorphism and isomorphism.**
6. **Ring,integral domain, field, Sub rings and** Ideals**and will be able to readily give examples of each of these kinds of algebraic structures**.

INTEGRAL CALCULUS
MATH309TH

After the completion of the course, Students will be able to

1. Perform integration by partial fraction and integration of rational and irrational functions.
2. Properties of definite integrals and their integration.
3. Obtain various reduction formulae by integration.
4. Find length and area of curves in planes.
5. Find the volume and surfaces of the solids generated by the resolution and volume between two solids.
6. Calculate the repeated integrals that involves double and triple integrals.

VECTOR CALCULUS
MATH310TH

After the completion of the course, Students will be able to

1. Define scalar valued point function and vector valued point functions and to calculate the scalar and vector product of three vectors, product of four vectors and understands the concept of coplanar vectors.
2. Calculate reciprocal vectors and derivatives along a curve.
3. Calculate directional derivatives and gradients.
4. Apply gradient to solve problems involving normal vectors.
5. Explain physical meaning of curl and divergence in terms of fluid flow.
6. Apply divergence and curl to check for solenoidal and irrotational vectors.
7. Define and apply Laplacian operator.
8. Define orthogonal curvilinear coordinators, gradient, divergence, curl and Laplacian operators in terms of curvilinear coordinates.
9. Understand the line integrals which can be used to find work done by a force field and surface integrals and volume integrals.
10. State and apply Green's Theorem, Stokes's Theorem and Gauss Divergence Theorem and to solve various problems involving line integrals, Surface integrals and volume integrals.

B.A./B.Sc. Mathematics 3rd Year

MATRICES

MATH301TH

After the completion of the course, Students will be able to

1. Know the types and properties of matrices and perform the various operations such as addition, multiplication and transposition and express a system of simultaneous linear equations in matrix form.
2. Find the inverse of matrix by elementary row operations.
3. Solve the system of homogeneous and non-homogeneous equations by using matrices.
4. Find the rank of matrices by determinants and by reducing them to row reduced echlon forms and normal forms.
5. Find the characteristic equation, eigenvalues and corresponding eigenvectors of a given matrix.
6. Determine if a given matrix is diagonalizable
7. Define vector space, independent and dependent vectors , linear span and basis of vectors.
8. Define the translation, dilation, reflection and rotation in a line and plane with geometrical interpretations.

NUMERICAL METHODS

MATH304TH

After the completion of the course, Students will be able to

1. analyze and evaluate the accuracy of common numerical methods.
2. Apply numerical methods to obtain approximate solutions to mathematical problems.
3. Apply numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
4. Find the solution of non-linear equations by using Bisection Method, Secant Method, Regula Falsi Method and Newton's Raphson Method.
5. Solve the system of linear equations by direct methods such as Gauss Elimination and Gauss Jordan Method.
6. Understand the terminating criteria for iterative methods and to apply such methods like Jacobi and Gauss Seidel Methods to solve system of linear equations.
7. Understand the basic principles and fundamental assumptions of interpolation.
8. Apply Newton's forward and backward difference interpolation formula for equal intervals.
9. Understand and apply Lagrange interpolation formula and Newton's Divided Difference Formula for equally spaced points.
10. Estimate the error in polynomial interpolation.
11. Apply Trapezoidal Rule, Simpson's1/3 Rule, Simpson's 3/8 Rule and Weddle's Rule for numerical integration.

PROBABILITY AND STATISTICS

MATH313TH

Learning outcomes: After studying this course, the students will be able to do the following:

- Define sample space, probability functions, distinguish between discrete and continuous random variables.
- Define probability density functions and cumulative distribution functions.
- Find the mean, variance, mathematical expectation, moments about origin and about mean, moment generating function and characteristic function.
- Distinguish between different types of distributions (like uniform distribution, binomial distribution, Poisson distribution, normal distribution, exponential distribution) and will also be able to solve different problems based on these distributions.
- Define joint cumulative distribution functions and joint probability density functions and solve different problems based on their properties.
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TRANSPORTATION AND GAME THEORY
MATH317TH

Learning outcomes: After studying this course, the students will be able to do the following:

- Differentiate between different types of solutions such as feasible solution, basic feasible solution, initial basic feasible solution, degenerate and non-degenerate solution etc.

- Define transportation problem and give its mathematical formulation.
- Solve transportation problem using North-West Corner method, Least Cost method, VogelApproximation method.
- Define assignment problem, give its mathematical formulation and find its solution using Hungarian method.
- Define and solve two persons zero sum games and games with mixed strategies.

PROGRAMME OUTCOMES
B.A./B.SC. MATHEMATICS

1. Students will acquire a scientific temperament and analytical thinking skills.
2. Students will be familiar with the fundamentals of Mathematics, including its vocabulary and notations.
3. Students will gain technical knowledge and practical skills in a variety of Science stream subjects.
4. Students will gain employability and professional prospects in a number of industries and other sectors.
5. Students will acquire the problem-solving aptitude, Mathematical modeling abilities and communication skills required for a variety of career paths.
6. Students will have a fundamental knowledge of Mathematics in order to pursue further studies in the discipline or other professional and practical courses.

Students will learn about a variety of social and environmental concerns and build solutions-oriented approaches to them.

PROGRAM OUTCOME: Department of Political Science

Programmer Outcomes (PO's): Program Learning outcomes are statements that describe what learners will know and be able to do when they graduate from a program. Since the subject is mostly concerned with understanding human behavior, it is directly related with the issues of human concerns. After successful completion of BA programme, the student would have the following attributes:

- The graduate will understand the impact of Arts on Society.
- The graduate will be able to perform jobs in different fields such as education, banking, LIC, business, public service, politics, policy making, self-employed etc. where

qualities of precision, analytical mind, logical thinking, clarity of thought, qualitative and quantitative decision are required.

- The graduate will become a successful professional by demonstrating logical and analytical ability.
- The graduate will work and communicate efficiently in an interdisciplinary environment.
- The graduate will become successful to solve the current problems prevalent in the state, national and world level.
- A graduate will become a successful social-worker, politician, writer and speaker.
- A graduate will become productive citizens dedicated to serving their communities, their nations and the world.
- Graduates of the BA programme in political science will become lifelong learners as they become cognizant of the institutions and processes of governance and the policies and historical and current events which shape their lives.

Programme Specific Outcomes Political Science (PSO's):

Department of Political Science of GC CHOWARI trains the students to understand basic concepts of political science such as Democracy, State, Govt., Liberty, Equality, Justice, liberalism, Marxism, Socialism, Right etc. In this department, education means enrichment of principles of political science along with overall personality development. The outcome is that the students of political science are at par with the best of institutes of the state. As part of the preparation process, the department of political science has adopted the specific outcomes to be achieved are as follows:-

- An ability to apply knowledge of political science with other social sciences.
- An ability to communicate effectively.
- An ability to identify formulates and solves political problems at State, National and International Level.
- The broad education necessary to understand the impact of politics in a global, economic, environmental and social context.

- An ability to use the techniques, skills and ideas necessary for effective leaders.

Course Outcomes (CO's)

All graduate having political science as one of the subject will have to clear 33 paper's in which 14 major core course paper of 4 credits each, 10 minor elective course paper of 4 credits each, 6 compulsory course paper of 3 credits each and 3 GI and H course paper of 1 credits each while core /Elective additional course paper would be depend upon his choice which credits will be 4.

DEPARTMENT OF POLITICAL SCIENCE

Sr. No.	Semester/Class	Course name	Subject Code	OUT COME
1.	B.A.1st Year	Introduction to Political Theory.	POLS-101	In this course students learn about what is Politics, meaning of Political theory, meaning of STATE and different Concept regarding Liberity, Equility, Justic & Rights.
2.	B.A.1st Year	Indian Government and Politics.	POLS-102	In this course students gained knowledge of Indian Constitution i.e. Main features of Constitution, Fundamental rights, Duties, Indian Parliament, President of India, P.M.& Party System of India. They also awared about Communalism, Social Movement & Strategies of development in India.
3.	B.A.2ndYear	Comparative Government and Politics	POLS-201	In this course the students tought about What is Copparative Politics & its meaning, nature ,scope and unity.Second Different Meathods of Comparative Method.In this course what is Parliamentary & Presidential system,Electoral System,Party system and Notion of the Welfare State.
4.	B.A.2nd Year	Legislative Support.	POLS-203	In this course students seek knowledge about Local Government (Rural) & (Urban) & State Legislature and the Parliament.Students also tought the Process of Making Law.In this course Reading the Budget Document in the State also intrudsed.
5	B.A.2nd Year	Introduction to International Relations.	POLS-202	In this Course students were intimated about different approaches to study of the International Relations. The topic about Cold War, Post-Cold War Era, Emerging

				Centers of Power and Indian Foreign Policy.
6	B.A.2nd Year	Public Opinion and Survey Research.	POLS-204	In this course students introduced about Research. What is Sampling ,how it can collect ,What is Social Survey, Interview and Questionnaire.
7.	B.A.3rd Year	I. Themes in Comparative Political Theory..	POLS-301(A)	In this course what are the features of Indian & Western Political Thought. Different types of thought i.e. Locks thought on Rights,J,S,Mill on Liberty,Tilak and Gandhi on Swaraj, Dr. B.R.Ambedkar on Social Justice and Nehru's on Socialism.
8.	B.A.3rd Year	Democratic Awareness Through Legal Literacy.	POLS-303	In this course the Legal System in India ,Criminal& Civil Courts, Juvenile, Women Courts and the role of Tribunals in the constitution were taught to the students. They were also introduced about how to file F,I,R. and understanding the application of Law.
9	B.A.3rd Year	I. Democracy and Governance.	POLS-302 (A)	In this course students learned about Indian Parliamentary System, role of President, Prime Minister,Hon;ble Supreme Court. They also seek knowledge about State Legislature, Governer, Chief Minister & State High Court.
10.	B.A.3rd Year	Peace and Conflict Resolution.	POLS-304	In this course students learned about International Conflict,Management resolution of Transformation,Peace Building, types of Conflicts,typesof Conflicts & Resolve Conflict.

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PROGRAM OUTCOME:
Department of Public Administration

The students will get the knowledge about Administration. The students will be become aware about what is the difference between public administration and private administration. The relationship of public administration with other subjects. The students will get the knowledge of information technology. How to handle human resources, they will know about human resources. They will know about the leadership and stress management techniques. They will get the knowledge about local government and financial administration. Students will know what the budget is and how to prepare budget. They will become aware about local government and their functioning. Apart from this the programme helps the students in many ways:

1. Guide students in decision making in public matters.

2. Develop understanding among students about development and sustainable development.

3. Programme will help the students to go in the civil services.

4. Programme will help the students to develop rational thinking.

5. Provides opportunities for getting jobs in both private and Govt sector.

6. Develops skills among the students to live better life.

7. Helps to develop scientific thinking.

COURSE OUTCOMES:

BA FIRST YEAR

DSC-1A

Administrative Theory

On the completion of this course

1. Students will be able to understand that what the public administration is.

2. Students will be able to understand that what the difference between public administration and private administration is.

3. Students will be able to understand that what the organization is and how many types of organization are found in the system.

4. They will be able to understand that what the communication is and how will better communication help to improve administration.

5. They will be able to understand that what should be the quality of a good leader

DSC-1B

Indian Administration

On the completion of this courses the students will be able to understand the Brief account of Indian Administration during ancient period, Mughal period, British Rule and after Independence. Indian Administration: Nature, Legacy and Features of Indian Administration. They will also able to understand the constitutional Authorities: Finance Commission: Organizational structure, functions and role, Election Commission: Organizational structure, functions and role, Comptroller and Auditor General of India: Organizational structure, functions and role. Problem of corruption in Indian Administration: Meaning, Causes and Control, Lok Pal and Lokayukta: Role and responsibilities Citizen's Charter: meaning, significance Right to Information Act, 2005: Objectives and main provisions.

BA-IInd Year Core Course-DSC-1C Code: PUBA 201-A Course: Administrative Thinkers

On the completion of this courses the students will be able to understand the main thinking of the all thinkers.

1. Kautilya: Brief Life Sketch, Administrative of Kautilya's Arthshastra Saptang Theory or Elements of State and Role of King and Qualities.
2. Mahatma Gandhi Brief Life Sketch Concept of Ideal State Democracy and Administration, Theory of Trusteeship, Nonvionalce and Satyagraha
3. F.W. Taylor: brie life sketch, Principles of Scientific Management, Mental Revolution, Incentive wage system.
4. Elton Mayo Brief life Sketch, Human Relation Theory, Hawthorne Experiments, Importance, effects of Hawthorne Experiments.
5. Max Weber: brief life sketch, Theory of Authority Structure, Theory of Bureaucracy.
6. Herbert Simon: brief life sketch, Classification of Decisions, Steps in decision making Simon's Bounded Rationality Model.
7. Abraham Maslow: brief sketch, The Need Hierarchy Theory of Motivation.
8. Frederick Herzberg: brief life sketch: Two Factor or Motivation Hygiene Theory.

BA-II Year Core Course CODE: PUBA 202-A Course DSC 1D Course: Development Administration

On the completion of this courses the students will be able to understand the concept of the development. Development: Definition, Nature and Dimensions of Development. Problems of Development in Developing Countries. Sustainable Development: Concept, Features and significance. Development Administration: Meaning Nature, and Scope. Essential Features of Development Administration. Difference between Traditional and Development Administration. Machinery for Planning in India NITI Aayog, Organization, Functions and Role. National Development Council, Function and Role. State Planning Board, Organization, Function and role with special reference to Himachal Pradesh Participation and Role of various Agencies in Development Administration. Political Parties, Local Bodies, NGO's, Self Help Groups (SHGs), Bureaucracy.

BA-IInd Year Skill Enhancement Course; SEC-1A Code: PUBA 203-A Course: Computer Applications & Office Management

On the completion of this courses the students will be able to understand the functions of the computer its Design, Architecture: Operating System.MS Office Tools (Word, Power Points, and Excel etc.).Internet& Email etc. Importance of Office and Office Management- meaning of office, function of office, primary and administrative functions, importance of office. Concept of paperless office, Definition and elements of office management duties of an Office Manager Meaning and importance of filing, essential of good filing system. Office Record Management- Meaning, importance of record keeping management, principles of record management and types of records kept in organization. Office Machines and equipment- Importance objectives of office machines. Office Safety & Security-Meaning importance of office Safety, safety hazards and steps to improve office safety. Security hazard and steps to improve office security, Cyber Crimes. Measurement of Office Work – Importance purpose, difficulty in measuring office works.

BA-II Year Course: Skill Enhancement Course; SEC-2B CODE: PUBA204-A Course: Human Resource & Logistic Management

On the completion of this courses the students will be able to understand the Human Resource Planning Meaning, Objectives and Need, Factors affecting Human Resource Planning, HR Problems. Logistics-Concept, Principles and Forms, Logistics Management: Conceptual Framework Logistics Management: Components: Procurement of Material and Inventory Control (Economic Order Quantity, ABC and VED Analysis), Material Handling and Packaging, Transportation, Warehousing Storage and Security, Logistics Information System Logistic Management: Emerging Trends Green Logistics Effective Logistics Management: Challenges (Human Resource Management, Financial Management, Inventory/Materials. Outsourcing, Customer Satisfaction etc)

BA-III Year Code: PUBA301-A Course: SEC-3C Skill Enhancement Course Course: Leadership Styles and Conflict Management

On the completion of this courses the students will be able to understand the Meaning of Leadership, types of Leadership Qualities and Functions of Leadership. Leadership Styles viz autocratic style, Democratic style and Laissez Faire style. Nature and Causes of Organizational Conflicts Conflicts in an Organization: Criteria for Conflict Management, bargaining strategies in negotiation Negotiation process Stages. Techniques of Negotiations: Third-party Negotiations. Styles of Handling Inter-personal Conflicts and Managing Conflict Management Process: Case Studies. The Arbitration and Conciliation (Amendment) Act, 2015

BA-III Year Code: PUBA302A Course SEC-4D Skill Enhancement Course Course: Stress & Time Management

On the completion of this courses the students will be able to understand the Stress: Nature and Symptoms Sources of Stress: Environmental, Social, Physiological and Psychological Workplace Stress: Major Causes. Stress and Health: Effects of Stress on Health. Time Management: Concept. Waste of Time: Distractions at Workplace. Time Wasters and Time Savers. Effects of Poor Time Management on Job Performance

BA-III Year Course: DSE-1-A (Option -I) Discipline Specific Elective CODE; PUBA303-A

On the completion of this courses the students will be able to understand the Evolution of Local Government in India. Local Government under British Rule and Post Independent period. Local Self-government- Meaning, Nature and significance. Organization and Functions of Gram Panchyat. Panchyat Samiti-Organisation, Structure and Function. Zila Parishad- Organization, Structure and Function. 73rd Constitutional Amendment Act- Main Features. Municipal Corporation: Organization, Structure and Functions ii. Power and Function of Mayor and Municipal Commissioner. Municipal Committee/Council/Nagar Panchyat Organization and functions. Main Features of 74th Constitution Amendment. Finance of Local Self Bodies. Reasons for Poor Financial Position and suggestion. Machinery for Supervision & Control over Local Bodies.

BA-III Year Code: PUBA306-A Course: DSE- IB; Option II Discipline Specific Elective Course: Financial Administration.

On the completion of this courses the students will be able to understand the Government Budget- Concept, Features, Types, Principles and Functions, Government Budgeting in India- Preparation, Enactment and Execution, Delegation of Financial Powers and Control over Expenditure, Role of Ministry of Finance. Tax Administration In India- Types of Taxes in India (Centre, State and Local) Methods of Taxation, Role of Central Board of Direct Taxes and Central Board of Excise and Customs and GST.

BA-III Year GE-1 Code: GE-1; PUBA307-A Course: Constitutional and Administrative Aspects of Himachal Pradesh

On the completion of this courses the students will be able to understand the Emergence of Himachal Pradesh. Himachal as Chief Commissioner and Part C State. Re-organization of H.P. and State re-organization commission. Himachal Pradesh towards full statehood. Administrative History: Himachal Pradesh under Chief Commissioner. Administration of Himachal Pradesh during Union Territory Period. Administrative setup of Himachal Pradesh at the time of re-organization. Present administrative setup of Himachal Pradesh at state, division, District and Block level. Local Government in Himachal Pradesh. Salient Feature of 73rd amendment act. Salient Feature of 74th amendment act. Composition and functions of Gram Panchayat, Panchayat Smiti & Zila Parishad. Composition and functions of Municipal Corporation & Municipal Council.

BA-III Year Code: GE-2; PUBA308-A option (I) Course: Disaster Management

On the completion of this courses the students will be able to understand the Disaster- Meaning, Types, and Causes of disaster and effects of disaster. Classification of Disasters- Hazard, Risk and Vulnerability-Natural and Man Made Disasters Disaster Profile of India. Organizational structure for Disaster management at National & State Level, Role of NDRF.Disaster Management: Act, Policy and Institutional Framework- Disaster Management Cycle with focus of Preparedness. Prevention and mitigation-Disaster Relief and Response-Damage Assessment-Rehabilitation, Reconstruction and Recovery relevance of Indigenous Knowledge-Community based Disaster Management-Disaster Management Strategies-Disaster Management Case Studies.

B.A. SOCIOLOGY–PROGRAMME SPECIFIC OUTCOMES:

- The BA Sociology program offers twelve courses in all. Students have to opt for ten

  Courses viz:

  1. Four Discipline Specific Courses **(DSC)** (two each in BA 1st and 2nd year)
  2. Four Skill Enhancement Courses **(SEC)** (two courses each in 2nd year and 3rd year)
  3. Two Discipline Specific Electives **(DSE)** in the 3rd year of the BA programme.

- Students opting Sociology as DSC-II have to study 6-courses viz:

  four DSCs and two DSEs, respectively.

- The Sociology department also offers two Generic Electives **(GE)**

  in 3rd year for students studying subjects other than sociology.

BA Sociology Course-wise learning objectives and outcomes are as follows:

Class	Course Title	Course Code/Type	Course Learning Outcome
B.A 1st Year	**1. Introduction to Sociology**	SOCL-A 101 **(DSC-1A)**	• Thecourse is intended to introduce some important basicconcepts of sociology, like Society, Community, Institutions, Association, Socialization, Culture, Social groups, Social Structure and function, Status and Role etc. • Students understand the emergence of discipline, various perspectives,institutionsand structureof societyin totality. • Understand the importance of subject and future career options through sociology.
	2. Society in India	SOCL-A 102 **(DSC-2A)**	• TofamiliarizestudentswithIndianSocietyandIndian Culture, rich past and heritage. • To studythe

			diversityandpluralityinIndianSociety Characterized by a multitude ofethnic, linguistic, religious,andcastedivisions • Will get to know about the different social institutions and understand their functions. • Develop a sociological understanding of various prevalent concerns of Indian society like communalism, casteism etc.
B.A 2nd Year	**3.Sociological Theories**	SOCL-A201 **(DSC-1C)**	• Tomakestudentunderstand thecontribution ofClassicalSociologist'stheoreticaland methodologicalinputstothesociety. • Thiscourseenrichesthesociologicalknowledgeofthestudentsbyunderstanding the works and theories of the classical thinkers, Auguste Comte, Emile Durkheim, MaxWeber, Karl Marx, are indispensable for understanding the sociological enterprise.

	4.Methods of Sociological Enquiry	SOCL-A202 **(DSC-2C)**	• Students getbasic understandingofhow toconduct ascientificstudyand research • Understand the methodology of undertaking research in social sciences and the specificprocedures or techniques that are used to identify, select, process, and analyze informationabout atopic. • Have a grip over the basic steps involved in social research and the types of social researchwiththeir applicability, • Develop an insight into the need and types of research design and the use of samplingmethodsforattendingo bjectivityand scientificstudy.
	5. Techniques of Social Research	SOCL-A203 **(SEC-1)**	• Enhance the skills of students to understand and use techniques employed by social scientists to investigate social phenomena with emphasis on formulating research design, methods of data collection, and data analysis. • It will provide students with some basic knowledge on how to conduct quantitative and qualitative research. • The focus will be on better understanding of research by the suggested field exercises.

	6. Sociology of Environment	SOCL-A 204 **(SEC-2)**	• Will sensitize students about the issues related to environmental concerns. • Will understand the interrelationship of environment and society. • Understandthenatureandpatternofecological crisis.
B.A 3rd Year	**7.Social Demography**	SOCL-A301 **(SEC-3)**	• Have an understanding of the interrelation between population and society. • Understand the concept of fertility, mortality and migration in the demographic processes. • Be acquainted with recent trends in demographic transitions.
			• The students can- - Understand population growth of the world and India and various facets of population studies. - Understand demographic theories that depict population change • Learn about the various policies and programmes adopted in the country to check population.

	8. Theory and Practice of Development	SOCL-A302 **(SEC-4)**	• Acquaint the learners with emerging issues of development theory and methodology of development practices adopted since the 1980s. • Help in understanding the conceptual classification of under developed, developing and developed nations. • Help in analyzing the role of Panchyati Raj System(PRI's), Urban Local Bodies(ULB's) and Non-government Organizations (NGO's) in the Development processes
	9. Marriage, Family and Kinship	SOCL-A304 **(DSE-1A)**	• Acquaint the students with the basic social institutions: marriage, family and kinship. • The course would enhance the knowledge base of the learner regarding thekinship system in general and about marriage, family and kinship pattern existing in India, inparticular. • Will able to critically examine contemporary issues in the fields of marriage, family and kinship. • Considers the issues and ethnographies with particular emphasis on diversity of practices.

	10.Social Stratification	SOCL-A305 **(DSE-2A)**	• Be introduced to various ideas of social inequality and their sociological analysis. • Explain basic concepts and theories of social stratification and inequality. • Able to understand how society categorize its people into ranking of socioeconomic tiers based on factors like wealth, income, race, education, caste and power.
	11. Polity and Societyin India	SOCL-A307 **(GE-1)**	• Able to understand the definition, nature and scope of political sociology. • Course seeks to introduce the students to the study of Indian politics from a Sociological Perspective. • In the process, it attempts to give the students theories, categories and conceptual tools to understand politics in relation to society in general. • The course aims to provide knowledge on the relationship between Sociology and politics and the interaction between society and political structures. • Understand concepts of power, party system, pressure groups, bureaucracy, democracy, civil society and its functions

	12. Economy and society	SOCL-A 308 **(GE-2)**	• Be introduced to the complexities of economic activity embedded in social relations from sociological viewpoint. • Acquainted with different type of modes of production. • To know about different social movement like Dalit movement, Women movement and also about social security.

PROGRAMME OUTCOMES OF SOCIOLOGY IN B.A COURSE

Onsuccessfulcompletionof thisprogram,thestudents wouldbeableto:

1) **Understand Society andSocialIssues:** The sociological knowledge about society provides learner ascientific perspective and attitude to understand the human behavior in social groups, social institutions, socialissues, culture and society at large. The student develops an understanding of analyzing society, social problems and culturefromdifferent and various perspectives.
2) **Conduct a Scientific Research:**The Research Skills of the learners develop to the extentthat they become capable of studying any social phenomenon in an objective manner.Acquiring sociologicalknowledge inthe formsof theoriesandmethodswouldmakestudentsgoodsocialscientiststhatwouldbecapabl eofidentifyingthe socialproblem,highlightingthe researchgaps, preparingapropermethodology.
3) **Think Critically:** The students demonstrate an ability to develop critical thinking about social problems, social institutions and different cultural aspects.Studentsstartunderstandingtheoppressedandmarginalizedvoices,spacesa nddiscoursescritically.
4) **DoScientificandAnalyticalReasoning:**Itwouldmakestudentrational,logicaland critical about the social events and contemporary social, political, economic and environmental issues and also enhance their skills andcapabilities. It would enable the learners to develop the ability to apply scientific logic andreasoningon socialphenomenon whichwill bebased onempirical factsand evidences.
5) **Qualify Various Exams:** The students would be also able to qualify the UPSC, PSC/UGC-NET/JRF/ and other examination of Social Welfare

Departments. Students would beable to get employment opportunities in the Teaching, Research, NGOs, Social WelfareDepartment,andHealthDepartment and inmanyothers.

6) **Understand Indian Society:**

Toenablestudentstohaveindepthknowledgeof Indiantraditions, social institution,society,culture,customs,rituals andIndian villages.

Tosensitizestudentsregardingthosecategoriesofthesocietywhoareattheperipherie sandmarginsincluding:Women,ScheduledCastes,ScheduledTribes, OBCsandothers.

बी.ए.हिंदी प्रोग्राम आउटकम और कोर्स आउटकम

प्रोग्राम आउटकम

बैचलर ऑफ आर्ट्स (हिंदी) भारतीय भाषा के महत्त्वपूर्ण स्नातक स्तरीय अध्ययन प्रोग्राम है । यह कोर्स कई महाविद्यालयों और विश्वविद्यालयों में प्रदान किया जाता है। इस कोर्स का उद्देश्य विद्यार्थियों में हिंदी भाषा, साहित्य, संस्कृति और सामाजिक पहलुओं की गहरी समझ विकसित करना है । बी.ए. हिंदी या बैचलर ऑफ़ आर्ट्स हिंदी तीन वर्षीय स्नातक स्तरीय कोर्स है जिसमें हिंदी भाषा, साहित्य संबंधित विषयों पर प्रमुख रूप से ध्यान दिया जाता है जिससे कि छात्रों को हिंदी भाषा के मौलिक सिद्धांतों, साहित्यिक कार्यों, लेखन कौशलों और साहित्यिक अध्ययन के मौलिक तत्वों को समझने में सहायता मिलती है। इसके अलावा विद्यार्थियों को साहित्य पठन-पाठन के माध्यम से सामाजिक आर्थिक, राजनीतिक और सांस्कृतिक पक्षों को समझने में मदद मिलती है । इससे न केवल छात्रों में हिंदी साहित्य की समझ बढ़ती है बल्कि हिंदी साहित्य के विभिन्न विधाओं के उद्भव और विकास परम्परा को भी जानने में सहजता होती है। इस प्रोग्राम में व्याकरण से संबंधित कई महत्वपूर्ण बिन्दुओं को शामिल किया गया है जिससे छात्रों के लेखन कला कौशल का विकास होता है। छात्र हिंदी विषय से स्नातक करके रोजगार के कई क्षेत्रों में अपना करियर बना सकते हैं।

बी.ए.हिंदी प्रथम वर्ष

क्रम सं	विषय	विषय कोड	विषय आउटकम (कोर्स आउटकम)
1.	प्रयोजनमूलक हिंदी	HIND101	इस पाठ्यक्रम के अंतर्गत हिंदी विषय से संबंधित कई महत्त्वपूर्ण बिन्दुओं को शामिल किया गया है। जिसके अध्ययन के पश्चात विद्यार्थियों को हिंदी भाषा में पत्र लेखन पत्राचार का व्यावहारिक ज्ञान में वृद्धि होगी। मुहावरें लोकोक्तियों तथा तद्भव, तत्सम , देशज इत्यादि शब्दों का प्रयोग करना सीखेंगे। देवनागरी लिपि को समझते हुए आधुनिक वैज्ञानिकता के संयोग के साथ साथ हिंदी का कंप्यूटर में प्रयोग और कार्यालयी क्षेत्र में हिंदी के प्रयोग में होने वाली समस्याओं को समझ पाएंगे। वैज्ञानिक एवं तकनीक क्षेत्रों में हिन्दी के अनुप्रयोग से परिचित कराकर उसमें योग्यता हासिल करना ।
2.	हिंदी साहित्य का इतिहास	HIND102	इस पाठ्यक्रम को पढ़ने के बाद विद्यार्थी आदिकाल,भक्तिकाल, रीतिकाल, आधुनिक काल के साहित्य और उनकी विशेष प्रवृत्तियों को समझ पाएंगे। कहा जाता है साहित्य समाज का दर्पण होता है। अतः हिंदी साहित्य अपने अलग -अलग कालखंडों में विभिन्न प्रवृत्तियों के साथ दिखाई देता है अतः इन प्रवृत्तियों के प्रस्फुटित होने के कारण तदयुगीन सामाजिक, राजनैतिक, सांस्कृतिक , धार्मिक और आर्थिक संदर्भों को समझने में सहायक होगा। इसके साथ ही हिंदी के महत्त्वपूर्ण कवियों और हिंदी साहित्य के विकास में उनके योगदन को समझ पायेंगे।
3.	मध्यकालीन हिंदी कविता	HIND103	इस पाठ्यक्रम के अंतर्गत हिंदी साहित्य में मध्यकाल के महत्त्वपूर्ण कवियों को शामिल किया गया है । कबीर, तुलसी, सूरदास, मीराबाई, रसखान, बिहारी , भूषण, घनानंद, इत्यादि के व्यक्तित्व और कृतित्व को समझ पायेंगे । ये हिंदी साहित्य के ऐसे पुरोद्धा कवि हैं जिन्होंने हिंदी साहित्य को एक नयी दिशा दी	आज भी हमारा साहित्य इनकी दी हुई रौशनी में निरन्तर आगे बढ़ रहा है और अपने आपको समृद्ध कर रहा है। इन कवियों को पढने के बाद छात्र हिंदी साहित्य में इनके योगदान को समझ सकेंगे तथा इन कवियों की प्रासांगिकता वर्तमान समय में क्यों बनी हुई है इसे जान पाएंगे।

4.	हिंदी भाषा सम्प्रेषण	HIND104	इस पाठ्यक्रम के अंतर्गत हिंदी भाषा की प्रकृति एवं विविध रूप जिसमें क्रिया, विभक्ति, सर्वनाम, के साथ-साथ हिंदी वर्ण व्यवस्था के अंतर्गत स्वर एवं व्यंजन तथा उनके प्रकारों के साथ उनकी विशेषताओं का अध्ययन करेंगे वर्णों का उच्चारण स्थान ,बलाघात ,संगम , अनुतान तथा संधि का ज्ञान प्राप्त कर,भाषा संप्रेषण के चरण को समझ पायेंगे । अतः इस पाठ्यक्रम के अध्ययन के पश्चात विद्यार्थियों में लेखन कलाकौशल में दक्षता हासिल होगी तथा हिंदी भाषा की व्याकरणिक बनावट और उसकी संरचनात्मकता का ज्ञान होगा ।

बी.ए. हिंदी द्वितीय वर्ष

क्रम सं	विषय	विषय कोड	विषय आउटकम
1.	अनिवार्य हिंदी (रचना पुंज)	HIND201	इस पाठ्यक्रम के विभिन्न इकाइयों अंतर्गत अलग-अलग काल खण्ड के कवियों को शामिल किया गया है । इसके साथ ही इसमें हिंदी साहित्य के विभिन्न विधाओं को शामिल किया गया है। कवियों में जहाँ कबीर, घनानंद, निराला. बालकृष्ण शर्मा नवीन,अज्ञेय,गजानन माधव मुक्तिबोध, और सुदामा पाण्डेय धूमिल जैसे कवि शामिल है तो प्रेमचंद, मोहन राकेश ,उदय प्रकाश तथा काशीनाथ जैसे हिंदी कहानी के महत्त्वपूर्ण हस्ताक्षर शामिल हैं जिन्होंने हिंदी कहानी को एक नयी दिशा दी। इस पाठ्यक्रम के अध्ययन के पश्चात विद्यार्थी अलग-अलग काल के कवियों, कहानीकारों और निबंधकारों और उनकी साहित्यिक पृष्ठभूमि को जान सकेंगे तथा साहित्य की भिन्न-भिन्न विधाओं को समझ पायेंगे ।
2.	आधुनिक हिंदी कविता	HIND202	इस पाठ्यक्रम के अंतर्गत हिंदी साहित्य के आधुनिक काल के महत्त्वपूर्ण कवियों जैसे भारतेंदु हरिश्चंद्र, मैथिलीशरण गुप्त, जयशंकर प्रसाद,सूर्यकान्त त्रिपाठी निराला, अज्ञेय, नागार्जुन तथा नरेश मेहता जैसे बहुमुखी प्रतिभा के धनी कवियों को शामिल किया गया है। जहाँ भारतेंदु को हिंदी में आधुनिककाल का प्रवर्तक माना जाता है तो दूसरी और गुप्त जी को आधुनिक हिंदी कविता में राष्ट्रीयता की भावना को उद्घोषित करने का श्रेय दिया जाता है। प्रसाद और निराला छायावाद के प्रमुख कवि माने जाते हैं तो नागार्जुन तथा नरेश मेहता प्रगतिवाद के प्रमुख कवि माने जाते हैं । सच्चितानंद हीरानंद वात्स्यायन अज्ञेय को हिंदी साहित्य में प्रयोगवाद का जनक माना जाता है। इन कवियों को पढ़ने के बाद छात्रों को हिंदी साहित्य विभिन्न युग के कवियों और उस कालखण्ड की प्रवृत्तियों और विशेषताओं को समझ पायेंगे ।
3.	हिंदी गद्य साहित्य	HIND203	इस पाठ्यक्रम में हिंदी साहित्य के कई महत्त्वपूर्ण विधाओं जैसे उपन्यास,कहानी, निबंध आदि को शामिल किया गया है । जैनेन्द्र का उपन्यास 'त्यागपत्र', प्रेमचंद, जयशंकर प्रसाद, यशपाल तथा उषा प्रियंवदा की कहानियों को शामिल किया गया है। निबंधो में आचार्य रामचंद्र शुक्ल, हजारी प्रसाद द्विवेदी, महादेवी वर्मा तथा प्रभा खेतान के निबंधों को शामिल किया गया है। इस पाठ्क्रम के अध्ययन के पश्चात विद्यार्थी यह समझ पायेंगे कि कैसे साहित्य समाज से जुड़ा हुआ है तथा जैसे जैसे समाज में परिवर्तन

			होता है ठीक उसी प्रकार से साहित्य में भी परिवर्तन होता चला जाता है। साहित्य समाज का संचित प्रतिबिम्ब होता है अतः साहित्य और समाज को पृथक नहीं किया जा सकता है।
4.	कार्यालयी हिंदी	HIND204	इस पाठ्यक्रम के अध्ययन के पश्चात हिंदी भाषा के विभिन्न रूप, शिक्षण माध्यम- भाषा,राजभाषा का स्वरुप, भारतीय संविधान में राजभाषा संबंधी परिनियामावाली तथा राजभाषा के रूप में हिंदी के समक्ष आने वाली व्यावहारिक कठिनाइयाँ और उसके संभावित समाधान को समझ सकेंगे। इसके साथ ही टिप्पण,प्रारूपण, संक्षेपण, कैसे लिखे जाते हैं इसे समझ पाएंगे और विभिन्न प्रकार के पत्राचार,प्रशासनिक पत्रावली की निष्पादन प्रक्रिया को समझ पायेंगे। वर्तमान समय में कार्यालयी प्रयोजनों के लिए यांत्रिक उपकरणों का प्रयोग किया जा रहा है अतः इनका प्रयोग कैसे किया जाता है इसे समझ सकेंगे।
5.	अनुवाद विज्ञान	HIND206	इस पाठ्यक्रम के अंतर्गत अनुवाद से जुड़े कई महत्वपूर्ण बिन्दुओं को शामिल किया गया है। आज विश्व भर में अनुवाद की महत्ता को स्वीकार कर लिया गया है। आज भारतवर्ष ही नहीं बल्कि विश्व के अलग-अलग देशों की संस्कृति और साहित्य को जानने का एक मात्र साधन अनुवाद ही है। इस पाठ्यक्रम से विद्यार्थी अनुवाद के विभिन्न प्रकारों, अनुवाद संपादन की विधियों, एक कुशल अनुवादक की योग्यता तथा हिंदी में अनुवाद का भविष्य कैसा होगा इसे जान सकेंगे। इसके साथ ही विश्व भाषाओं की प्रमुख कृतियों के हिंदी अनुवाद तथा हिंदी की प्रमुख कृतियों के विश्व के अलग - अलग भाषाओं में किये गये अनुवाद की जानकारी बढ़ेगी।

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क्रम सं	विषय	विषय कोड	विषय आउटकम
1.	रंग आलेख एवं रंगमंच	HIND301	इस पाठ्यक्रम में नाट्यशास्त्र तथा नाटक से सम्बंधित विभिन्न बिन्दुओं को शामिल किया गया है जैसे नाटक. एकांकी, लोकनाट्य, प्रहसन, काव्यनाटक, नुक्कड़ नाटक, प्रतीक नाटक आदि नाटक को शामिल किया गया है। इससे विद्यार्थियों को नाटक के रचना विधान और उसके विभिन्न अंगो की जानकारी मिलती है। इसके साथ ही हिंदी साहित्य में नाट्यलेखन की परम्परा तथा नाटक का इतिहास और उसकी प्रवृतियाँ की जानकारी मिलती है। इसके अंतर्गत हिंदी के प्रमुख नाटक और नाटककारों तथा नाटक के विकास में उनकी भूमिका को विद्यार्थी समझ सकेंगे और हिंदी रंगमंच के प्रमुख रूप तथा हिंदी क्षेत्र की प्रसिद्ध रंगशालाओं, संस्थाओं को जान पायेंगे। नाटक प्रस्तुतीकरण के दौरान रंग सज्जा, ध्वनि व्यवस्था, रंगमंचीय भाषा कैसी होनी चाहिए इसे समझ सकेंगे।
2.	समाचार संकलन एवं लेखन	HIND304	इस पाठ्यक्रम के अंतर्गत समाचार लेखन से संबंधित विषयों को शामिल किया गया है। इसके अध्ययन के पश्चात विद्यार्थी समाचार की संरचना, उसके मूल्य तथा समाचार के स्रोत कौन-कौन से होते हैं समझ सकेंगे। इसके साथ छात्र-छात्राएँ समाचार लेखन, सिद्धांत, समाचार के प्रकार तथा इससे जुड़े विविध क्षेत्रों को समझ पायेंगे।

3.	लोक साहित्य	HIND305	इस पाठ्यक्रम के अंतर्गत लोक साहित्य के प्रमुख रूपों को लिया गया है। जैसे – लोकगीत, लोकनाट्य, लोककथा, लोकगाथा। इसके अध्ययन के पश्चात विद्यार्थी यह समझ सकेंगे कि लोक साहित्य का स्वरूप कैसा होता है तथा लोक साहित्य और लोक संस्कृति कैसे एक दूसरे से संबंधित है। इससे विद्यार्थी हिमाचल के प्रसिद्ध लोकगाथाओं को जान पायेंगे। लोक साहित्य की अध्ययन की प्रक्रिया और इसके संकलन में आने वाली समस्याओं को समझ पायेंगे।
4.	छायावादोत्तर हिंदी कविता	HIND306	इस पाठ्यक्रम के अंतर्गत छायावादोत्तर हिंदी कविता के कवियों को शामिल किया गया है। अज्ञेय और मुक्तिबोध प्रयोगवादी कवि हैं तो नागार्जुन तथा शमशेरबहादुर सिंह प्रगतिवादी कवि है। भवानी प्रसाद मिश्र, कुंवर नारायण, सर्वेश्वरदयाल सक्सेना तथा केदारनाथ सिंह नयी कविता के महत्वपूर्ण हस्ताक्षर हैं। इन कवियों और उनकी कविताओं के अध्ययन के पश्चात विद्यार्थी इन कवियों व्यक्तित्व और हिंदी कविता के विकास में उनके योगदान को समझ पायेंगे।

B.A. English Programme Outcomes

Reading literature is an exuberant experience, in which students accelerate their mental, physical, spiritual, and emotional faculties. These faculties develop multiple facets of student's personalities and enlighten them through archives and other texts. Students strengthened their inner psyche, thoughts, ideas, and emotions. Because student life is the right time to imbibe all these personality-building virtues. Literature inserts a vibrant range of feelings and experiences, emotions and thoughts through books. By the installation of various virtues through books students not only learn to get access to their inner lives but also understand the feelings and emotions of others as well by empathizing. The Bachelor of English Literature program tends to nourish various dimensions concerning the all-round development of a student's personality. So, that they can analyze and interpret social phenomena in society and put into action their ideas through different interpretations and perspectives. They can feel and realize the reality of the world. Programmes also evolve within them the critical, innovative, and creative ethos. They learn to construct critical arguments in innovative ways and also reflect the ability to compare, comprehend, and contrast different thoughts and modes of expression from time to time, in different geographic areas.

Course Code/Title	Learning Outcomes
BA-I ENG CE 101 English -1 **Core English (Compulsory) for B.A. and B.Com.**	Under this course, students learn about: • The various forms ofpoetry. • Various themes are used in different poems Historical, Romantic,Metaphysical, Patriotic,etc. • Stories, essays, and poems in this unit introduced the themes ofNationalism, Partition, values of spirituality, andsilence. • Additionally, students also learned the usage of Articles, Prepositions, andVerb forms. • This course also enhanced students' abilities and skills of reading, speaking,and listening.

ENG DSC 102/DSC- 1A **British Literature-1 (Essays, Stories and Poems)**	In this course, newly enrolled students in BA-I learned about various aspects of literature: • About the difference between **English Language and EnglishLiterature.** • Students are introduced to the v**arious genres and literary devices usedin** English literature. • Students also learned about how social discrimination existed in society inthe form of **Class, Caste, Gender, Race,etc.** • They also learned **the tactics and tools to prevent** and eradicate these social evils. • This course also enhanced students' thinking capacity and criticalacumen. • Overall the literary contents of this course aim at bringing the ranges ofliterary richness of our cultures and traditions within the range of ourstudents.

ENG DSC 103 DSC-1B English **Literature-2 (Poems, Short Stories and Essays)**	This Course: • Introduce students to the different genres of theliterature. • Learned about the critical analysis and explanation of themes in the texts. • Develop the habit of reading among thestudents
ENG AECC 104 **Writing Skills**	This Course introduced students: • Use of English grammar correctly in writing andcommunicating. • Strengthen their writing abilities to write essays, letters, summaries,and invitations in a lucidway. • Develop the habit of diarywriting.
BA-II ENG CE 201 English -2 **Core English (Compulsory) for B.A. and B.Com.**	This Course: • Focuses on developing literaryunderstanding. • To understand the distinction between different genres ofliterature • To develop critical thinking and encourage them to flourish their argumentand perspectives. • To improve their grammaticalskills. • To teach them the art of presentation, discussion, anddebate.
ENG DSC 202 DSC- 1C **British Literature (Play and Novel)**	In this course, students broaden: • Their horizon through a play andnovel. • Different Aspects of Drama andNovels: • The basic elements of drama andnovels. • The distinction between novel and drama • Types of novels anddrama. • The distinction between comic and tragicdrama. • Studentsalsolearnedinthiscourseabouttheemergenceandfunctionofdrama.

	• Developed the habit of readingtext. • Victorian and Elizabethan literary cultures are introduced to thestudents.
ENG DSC203 **DSC-1D Literary Cross Currents**	This Course: • Students are introduced to different types of critical texts inliterature. • Introduce students to the Indian Writing in EnglishLiterature. • Enhance student's critical learning and thinkingfaculties.
ENG AEEC/SEC 204AEEC/ SEC-1 **Creative Writing, Book and Media Reviews**	This course students: • Learned about creativity in art andliterature. • Different genres of Creative writing and literaryterminology. • Also, know about the techniques of review writing. Critical review of books, movies, and TVserials. • Overall learned the process of creativewriting.
ENG AEEC/SEC 205 **Translation Studies and Principles of Translation**	This course: • Introducestudentstothebasicprinciplesoftranslationandtranscription oftexts from one language toanother. • Students expanded their perspectives by studying literature from different languages and literature of theworld. • Along with reading, students gradually learn and develop the art oftranslation.
BA-III ENG AEEC/SEC 301 AEEC/SEC-3 **Technical Writing**	This course Introduce: • The different notions of technicalwriting. • Technicalities of different forms of writing and functionalEnglish. • Enhance the basic knowledge regarding research methodology and different forms ofdrafting. • Proper usage of grammar in Technical Writing andResearch.

ENG AEEC/ SEC 302 **Business Communication**	This course aims to: • Introduce students to different forms and methods ofcommunication. • Importance of language and communication in the corporatesphere. • Effective usage of verbal and non-verbal language according to theprofessions. • Importance of body language and gestures incommunication. • Learned about the management of differentprofessions.
ENG DSE 303 DSE 1A **Soft Skills**	This course enhanced students: • Knowledge of necessary softskills • The basic difference between hard skills and softskills. • Familiarize students with important soft skills like Emotional intelligence, ListeningSkills,Adaptability,ProblemSolving,teamwork,andInterviewSkills. • Importance of soft skills concerning holistic and individual development of people.

	• Also enhanced human connections and harmonious interpersonal relationships at the personal as well as professionalambit. • Develop good communicationskills
ENG DSE 304 **DSE-1B Academic Writing and Composition**	In this course, students learned: • About the basic concepts of academic writing. • The usage and importance of formal language in day-to-daylife • Usage of grammar in formal language and its practicalimplication. • Enhanced critical and cognitive abilities of students. • A platform for individuals to express their thoughts, opinions, andarguments.

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Department of Sanskrit

Program Outcome (PO), Program Specific Outcome (PSO) and Course Outcome (CO) for **B.A. Sanskrit**

Department of Sanskrit	After successful completion of three –year degree program in Sanskrit a student should be able to;
Program Outcomes (PO) **B.A. Sanskrit**	Sanskrit is a very rich language of IE language group. Sanskrit is a medium to know about ancient Indian history, culture, religion, social life through its text . The academic programme of both Honours and General degree course are designed not only professional skill but also develop a deep understanding of rich heritage and dynamic prevalent scenario of India through various Sanskrit texts. PO1. Develop a strong concept of ancient Indian history, philosophy and literature . PO2. Enhance communication skill-listening, Speaking, Reading, Writing. PO3. Students will be able to write Dvenagari scripts which provide them paleographical knowledge to read out the script of modern languages like Hindi and Marathi. PO4. Increase in depth knowledge of the Core Areas of the subject. PO5. Students will demonstrate the skill needed to participate in conversation that builds knowledge with collaboration .
Program Specific Outcomes (PSO) **B.A. Sanskrit**	PSO1. Reasonable understanding of multi-disciplinary relevance of literature of Sanskrit like Veda, Philosophy, Grammar, Kavya, Smitisastra etc. PSO2. To make them eligible for higher education .

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	PSO3. Develop research aptitude and independent thinking . PSO4. After becoming graduate, students can apply in the field of UPSE, WBCS etc. And also after post-graduation they can apply against teaching posts in schools, colleges and other educational institutions.
Course Outcomes (CO) **B.A. Sanskrit** **First Year** **Sub. Code/Course**	**Outcomes**
	Upon completion of this course students will have following opportunities and skills.
SKT-DSC-101 **संस्कृत – काव्य**	इसपाठ्यक्रमसेछात्रसंस्कृतमहाकाव्यपरम्परा , जीवनकेलिएआवश्यकनीतिएवंनीतिसाहित्यतथामहाकवियोंकेजीवनचरितोंकाअधिगम करपाएंगे । नीतिसाहित्यकेकुछअंशोंसेतथासंस्कृतसाहित्यकोअध्ययनकरनेकाअवसरमिलेगा ।
SKT-DSE-102 **संस्कृत – गद्य – काव्य**	इसपाठयक्रमसेछात्रोंकोसंस्कृतसाहित्यमेंप्रचलितगद्य- साहित्यकीपरम्परातथाउनकेकवियोंकेविषयमेंजानकारीप्राप्तहोगी । इसमेंशिवराजविजयमऔरशुकनासोपदेशगद्य – काव्योंकाअध्ययनकियाजायेगा , जिससेव्यक्तिराजनीतिसेसंबंधितविषयोंऔरराजाकेपराक्रम ,नीति, व्यवहारआदिमहत्वपूर्णविषयोंसेपरिचितहोंगे ।
SKT-DSC-103 **नीतिसाहित्य**	उचितसमयऔरउचितस्थानपरउचितकार्यकरनेकीकलाकोनीतिकहतेहैं ।नीति , सोचसमझकरबनाएगयेसिद्धांतोंकीप्रणालीहै , जोउचितनिर्णयलेनेऔरसहीपरिणामपानेमेंमददकरतीहै ।नीतिसाहित्यहमेंनीतिप्रदएवंआचार –विचारकीशिक्षाप्रदानकरतेहैं ।
SKT-AECC-104 **उपनिषद ,** **श्रीमद्भगवतगीतातथापाणिनीयशिक्षा**	उपनिषदहिन्दूधर्मकेमहत्वपूर्णश्रुतिधर्मग्रन्थहैं ।इनकीसंख्यालगभग108 है , किन्तुमुख्यउपनिषद13 हैं ।हरएकउपनिषदकिसीनकिसीवेदसेजुड़ाहुआहै । इसमेंपरमेश्वर ,परमात्मा – ब्रह्मऔरआत्माकेस्वभावऔरसम्बन्धकादार्शनिकऔरज्ञानपूर्णवर्णनकियागयाहै । श्रीमद्भागवतगीता , भगवतगीतायागीताकाभारतीयविचारधाराकेइतिहासमेंलोकप्रियताकीदृष्टिसेसर्वाधिकमहत्वपूर्णस्थानहै ।इनकेअध्ययनसेहमईश्वरस्वरूप , आत्माकास्वरूपकर्मयोगइत्यादिअनेकआध्यात्मिकविषयोंकोजानसकतेहैंतथाव्यक्तित्व

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	औरमानसिकविकासमेंवृद्धिकरसकतेहैं । पाणिनीयशिक्षाशिक्षाकेसबसेमहत्वपूर्णग्रन्थोंमेंसेएकहै ।इसकेरचयितामहर्षिपाणिनिहैं । इसकेमाध्यमसेवर्णोंकिउच्चारणस्थानस्वरोंकेप्रकारइत्यादिसंस्कृतभाषाकेप्रारम्भिकसिद्धांतोंकोसरलतापूर्वकअध्ययनकियाजाएगा ।
B.A. Second Year	
SKT-DSC-201 **संस्कृत – नाटक**	इसकेअंतर्गतनाटककाउद्भवऔरविकास , महाकविकालिदासद्वाराविरचितविश्वप्रसिद्धअभिज्ञानशाकुन्तलमनाटकएवंकर्णभारनाटककानिरूपणकियागयाहै ,जिसमेमनोवैज्ञानिक, सामाजिकतथाव्यवहारिकविषयोंकाअध्ययनकियाजाएगा ।
SKT-DSC-202 **संस्कृत – व्याकरण**	किसीभीभाषाकीशुद्धताएवंसमृद्धिकेलिएव्याकरणकीआवश्यकताहोती , इसमेंव्याकरणकेप्रारम्भिकविषयोंकासरलतापूर्वकवर्णनकियाजायेगा ।
SKT-DSC-203 **व्याकरणएवंसंयोजन**	संस्कृतव्याकरणकेअंतर्गतव्याकरणकेप्रमुखसरलएवंगूढ़विषयोंकाअध्ययनकियाजायेगा जोसंस्कृतएवंहिन्दीभाषाकेअध्ययनकीदृष्टिसेबहुतउपयोगीहै ।
SKT-DSC-204 **आयुर्वेदकेमूलसिद्धांत**	इसकेअंतर्गतआयुर्वेदकेमूलसिद्धांतोंकानिरूपणकियागयाहै , जोस्वास्थ्यकीदृष्टिसेजीवनकेलिएबहुतउपयोगीहैं ।
SKT-AECC-205 **संस्कृतछंदएवंगायन**	इसविषयमेंसंस्कृतसाहित्यकेप्रमुखछंदोंकोवर्णितकियागयाहैतथाउनकेगायनपद्धतिकानिरूपणकियागयाहै ,जोसंस्कृतभाषामेंकाव्यरचनाकेलिएसहायकहैं ।
B.A. Third Year	
SKT-DSC-301 **व्यक्तित्वविकासकाभारतीयदृष्टिकोण**	इसमेंव्यक्ति ,व्यक्तिकीअवधारणा ,व्यक्तिकेप्रकारतथाव्यवहारसुधारकेमापदंडोंकानिरूपणकियागयाहै , जोव्यक्तिकोआदर्शजीवनजीनेकेलिएप्रेरितकरेगा ।
SKT-DSC-302 **साहित्यिकसमालोचना**	इसकेअंतर्गतकव्यवैशिष्टय , काव्यभेद , काव्यस्वरूप ,काव्य –प्रयोजन ,शब्दशक्तियाँतथारसकाविवेचनकियागयाहै । साहित्यिकविधाकेविद्यार्थियोंकेलिएउपर्युक्तविषयअत्यंतमहत्वपूर्णहैं ।
SKT-DSC-303 **पातंजलयोगसूत्र**	प्रस्तुतपाठ्यक्रमकेअंतर्गतयोगकेविविधआयामोंकाअध्ययनकियाजाएगातथायोगकीउपादेयताकोवर्णितकियाजाएगा ,जिसकेअध्ययनसेव्यक्तिशारीरिक , मानसिकतथावैचारिकरूपसेजीवनमेंसमृद्धिप्राप्तकरसकताहै ।
SKT-DSC-304 **भाषाविज्ञानकेमूलभूतसिद्धांत**	इसमेंभाषा – विज्ञान , भाषा – परिवार ,वाक्यंत्रतथाउससेनिकलनेवालीध्वनियां , अर्थपरिवर्तनइत्यादिविषयोंकाअध्ययनकियाजायेगाजोभाषाकीशुद्धता ,वैज्ञानिकताकेलिएबहुतउपयोगीहै ।
SKT-DSC-305 **भारतीयरंगशाला**	इसकेअंतर्गतभारतीयरंगशालाकाइतिहासएवंपरम्परा , रंगशालानिर्माणप्रकार , रंगमंच ,अभिनय ,नाटक , वस्तुरसइत्यादिनाट्यशास्त्रकेप्रमुखविषयोंकानिरूपणकियागयाहै , जोनाट्यकलाकीदृष्टिसेउपयोगीहै ।

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SKT-DSC-306 **भारतीयवास्तुशास्त्र**	प्रस्तुतपाठ्यक्रममेंवास्तुशास्त्र , वास्तुस्वरूप , भूमिपरीक्षण ,दिक् – साधनइत्यादिज्योतिषकीवास्तुशास्त्रविधाकेविषयोंकोनिरूपितकियागयाहै , इसपाठ्यक्रमकेअध्ययनसेछात्रवास्तुशास्त्रकेकईप्रमुखसिद्धांतोंसेअवगतहोंगेजोजीवनके क्षेत्रमेंसहायकरहेंगे |

Department of Physics

B.Sc. Physics

Programme Specific Outcomes:

1. Understanding of core knowledge on various papers of Physics. Clear the concepts which help them in understanding physical phenomenon in nature.

2. Gain a wide spectrum of skills which will enable them to solve both theoretical and experimental problems.

3. Understand the importance of renewable energy and its applications

4. Demonstrate skills and competencies to conduct scientific experiments related to Physics.

5.Identify their area of interest and further specialize in the Physics.

6. Secure jobs in the field of Education, and in industries which require Scientific knowledge.

7.Relate their knowledge and skills in carrying out independent work.

8. Analyse situations, search for truth and extract information, formulate and solve problems in a systematic and logical manner.

9.Discuss debate and communicate in a clear and logical way.

Course Outcomes:

I. PHYSICS-DSC 1A: MECHANICS (Credits: Theory-04)

Code: PHYS101TH

Students will be able to articulate and describe:

1. Relative motion. Inertial and non-inertial reference frames.

2. Study of the collisions and scattering phenomena & motion in central force fields.

3. Special Theory of Relativity and its applications.

4. Centre of mass and moment of inertia of mechanical systems.

5. Newton's laws of motion; symmetry principles and their relation with conservation principles.

6. Introduction to analytical mechanics as a systematic tool for problem solving.

II. PHYSICS-DSC 1B: ELECTRICITY, MAGNETISM AND EMT

(Credits: Theory-04); Code: PHYS102TH

1. Students will be able to understand the concept of the electric force, electric field andelectric potential for stationary charges. They are able to calculate electric potential and electricfield by using Gauss's law.

2. Student will understand the dielectric phenomenon and effect of electric field on dielectric.

3. Study the concept of magnetic field, magnetic field for steady currents using Biot-Savart'sand Ampere's Circuital laws.

4: Student will learn magnetic materials and its properties.

III. PHYSICS-DSC 2A: STATISTICAL AND THERMAL PHYSICS

(Credits: Theory-04); Code: PHYS201TH

1. Introduction to the concepts of probability, microstate, macro-state and most probable macro-state or equilibrium state.

2. Use the statistical physics methodssuch as Maxwell - Boltzmann distribution, Fermi-Dirac and Bose-Einstein distributions to solve problems in somephysical systems. Statistical basis of entropy.

3. Entropy as a bridge between Thermal and Statistical Physics, Laws of Thermodynamics and their application to study thermoelectric effect. Use of

Maxwell's thermodynamical relations to study different thermodynamical systems.

IV. PHYSICS-DSC 2B: WAVES AND OPTICS (Credits: Theory-04)

Code: PHYS 202TH

1. Study linear superposition of two simple harmonic oscillations and their behaviour andacquire knowledge of Lissajous figures.

2. Appreciate the study of damped and forces oscillatory systems in nature.

3. Study mechanically and electrically coupled systems.

4. Understand the propagation of electromagnetic wave in medium helps to study the properties ofelectromagnetic waves.

5. The knowledge of interferometers helps to study the phenomena of interference in laboratory.

6. The knowledge of diffraction gratings and its accessories help students to study diffractionphenomena.

7. Understand diffraction and imaging in terms of Fourier optics and gain physical and intuitive insight in a range of physics via the spatial Fourier Transform.

8.Understand optical phenomena such as polarisation, birefringence, interference and diffraction in terms of the wave model.

V. PHYSICS – SEC1: PHYSICS WORKSHOP SKILLS(Credits: Theory-03)

CODE: PHYS203TH

1. Aim of this course is to create awareness among the students about the mechanical,electrical and electronic tools through hands-on activities.

2. This course introduces the students to the workshop skills like cutting, drilling,

filing, different types of AC and DC generators, soldering- desoldering of electricaland electronics components, constructing regulated power supplies, etc.,

3. After completing this course students will gain skills of using various workshop tools.

VI. PHYSICS-SEC2: ELECTRICALCIRCUITS AND NETWORK SKILLS

(Credits: Theory-03); PHYS205TH

1. To know the appreciate the study of measurements.

2. To gain the knowledge of electrical and electronic skills.

3. Introduction of prime movers(machine).

4. To study of use bread board for designing the basic circuits.

VII. PHYSICS-DSE 3A: ELEMENTS OF MODERN PHYSICS

(Credits: Theory-04) Theory; CODE: PHYS301TH

1. Students learn about Planck's constant and light as a collection of photons; Photoelectric effect and Compton scattering. De Broglie wavelength and matter waves; Davisson – Germerexperiment.

2. Study of Rutherford model- instability of atoms and observation ofdiscrete atomic spectra; Bohr's quantization rule and atomic stability; calculation of energy levels forhydrogen like atoms and their spectra.

3. Knowledge of gamma ray microscope thought experiment; Wave-particle duality,Heisenberg uncertainty principle- impossibility of a particle following a trajectory; Estimating minimumenergy of a confined particle using uncertainty principle; Energy-time uncertainty principle.

4. Matter waves and wave amplitude; Schrodinger equation for

non- relativistic particles; Momentum and Energy operators; stationary states; physical interpretation ofwavefunction, probabilities and normalization; Probability and probability current densities in onedimension.

5. One dimensional infinitely rigid box- energy eigenvalues and eigenfunctions, normalization; Quantum mechanical scattering and tunnelling in one dimension - across a step potential and across a rectangular potential barrier.

6. Students learn about Size and structure of atomic nucleus and its relation with atomic weight;Impossibility of an electron being in the nucleus as a consequence of the uncertainty principle. Nature ofnuclear force, NZ graph, semi-empirical mass formula and binding energy.

7. Radioactivity: stability of nucleus; Law of radioactive decay; Mean life & half-life; different types of decay.

8.Fission and fusion-mass deficit, relativity and generation of energy; nature of fragments and emission of neutrons. Nuclear reactor: slow neutrons interacting with Uranium235; Fusion and thermonuclear reactions

VIII. PHYSICS-DSE 3B: NUCLEAR AND PARTICLE PHYSICS

(Credits: Theory-05); Code: PHYS304TH

1. To study of general properties nuclei.
2. To know the concept of nuclear model.
3. To understand the concept of nuclear reaction
4. To study of interaction of nuclear radiation with matter.
5. To study of detector for nuclear radiations.
6. To know the concept of particle accelerators and particle Physics.

IX. PHYSICS-SEC3: RADIATION SAFETY

(Credits: Theory-03); Code: PHYS307TH

1. Obtain basic information of radiation safety including understanding basic principles of ionizing radiation, the risks of working with radioactivematerials/radiation producing machines etc.

2. Obtain relevant information to work safely and confidently with radiation sourceswhile maintaining the professional standard of ALARA.

3. Understand typical everyday radiation safety topics, how radiation safety programsare implemented in a university, research, and or hospital setting.

X. PHYSICS-SEC4: RENEWABLE ENERGY AND

ENERGY HARVESTING(Credits: Theory-03)

Code: PHYS310TH

1. To understand the different kinds of Energy sources.

2. To study the basis of solar energy and solar radiation measurement.

3. To learn the fundamental principles and theory of wind energy conversion system.

4. Student will acquire enough knowledge enough knowledge about the renewableenergy resources.

5. This course helps the student to understand the concepts of energy sources and theirtechnologies.

6. To learn the environmental pollution and climate change.

7. To understand the basic need of carbon free energy .and student will acquire enoughknowledge about the renewable energy sources.

B.Sc. Botany: Programme Outcomes

Welcome to the Bachelor of Science (B.Sc.) in Botany programme. This programme is designed to provide students with a comprehensive understanding of plant biology and equip them with the skills and knowledge needed to succeed in diverse botanical fields. Throughout the programme, students will engage in hands-on learning experiences, rigorous academic coursework, and practical training in laboratories and field studies. By the end of the programme, students will emerge with a robust set of programme outcomes, preparing them

for careers in botanical research, environmental conservation, agriculture, and beyond. Let's explore the key programme outcomes of B.Sc. Botany programme.

1. **Foundational Knowledge:** Demonstrate a solid understanding of fundamental principles in botany, including biodiversity, plant anatomy, physiology, ecology, and molecular biology.
2. **Taxonomic Proficiency:** Develop skills in taxonomic plant identification, nomenclature and classification, enabling students to categorize and differentiate plant species.
3. **Experimental Competence:** Gain practical experience in designing, executing, and analysing experiments related to plant biology, using appropriate methodologies and techniques.
4. **Fieldwork Skills:** Acquire proficiency in conducting field studies, including plant sampling, biodiversity assessments, and ecological surveys, while adhering to ethical and environmental standards.
5. **Laboratory Techniques:** Master laboratory techniques essential for botanical research, such as microscopy, tissue culture and molecular biology methods.
6. **Critical Thinking and Analysis:** Develop critical thinking skills to evaluate scientific literature, interpret research findings, and propose hypotheses and solutions to botanical problems.
7. **Problem-solving Abilities:** Apply botanical knowledge and analytical skills to solve real-world problems related to plant conservation, agriculture, environmental sustainability, and ecosystem management.
8. **Communication Proficiency:** Effectively communicate scientific concepts and findings through written reports, oral presentations, and visual media, tailored to diverse audiences including peers, stakeholders, and the general public.
9. **Ethical Awareness:** Understand and adhere to ethical principles and guidelines governing botanical research and practice, including issues related to biodiversity conservation, genetic transformation, and intellectual property rights.
10. **Interdisciplinary Integration:** Recognize the interdisciplinary nature of botany and its connections to related fields such as ecology, genetics, agronomy, pharmacology, and environmental science, fostering a holistic understanding of plant biology.

11. **Technological Literacy:** Utilize modern technologies and tools relevant to botanical research, including laboratory instrumentation, computer software for data analysis.
12. **Environmental Stewardship:** Appreciate the importance of plants in ecosystem functioning, environmental conservation, and sustainable development, and contribute to efforts aimed at preserving plant biodiversity and mitigating environmental degradation.
13. **Professional Development:** Prepare for further studies or careers in botany-related fields, including academia, research institutions, botanical gardens, government agencies, environmental consulting firms, and industries such as agriculture, biotechnology, and pharmaceuticals.

B.Sc. Botany: Course Outcomes

B.Sc. 1st Year

Course Name – DSC-1A: **Biodiversity (Microbes, Algae, Fungi and Archegoniates)**

On completion of the course, students are able to:

1. Gain insight into the structure, reproduction, and economic importance of viruses and bacteria.
2. Explore the ecology, morphology, and economic significance of diverse algal species.
3. Understand fungal characteristics, life cycles, and symbiotic associations.
4. Analyze bryophyte adaptations, morphology, and ecological roles, with a focus on economic importance.
5. Delve into the morphology, anatomy, and ecological significance of Pteridophytes.
6. Investigate the characteristics, classification, and economic relevance of Gymnosperms, with a focus on *Cycas* and *Pinus*.
7. Synthesize knowledge across microbial and plant kingdoms, emphasizing ecological interactions and practical implications.

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Course Name – DSC-1B: Plant Ecology and Taxonomy

On completion of the course, the students are able to:

1. Understand ecological factors and their importance in functioning of ecosystem.
2. Analyze plant community characteristics, ecotone, and succession processes.
3. Understand ecosystem structure, energy flow, trophic organization, and biogeochemical cycles.
4. Understand foundations of plant taxonomy i.e. identification, nomenclature and classification.
5. Learn the functions of herbarium, botanical gardens, and documentation methods.
6. Understand cytology, phytochemistry, and molecular data in taxonomy.
7. Learn principles of botanical nomenclature, classification types, and prominent systems.
8. Learn about the characters of biologically important families of angiosperms.

B.Sc. 2nd Year

Course Name – DSC-1A: Plant Anatomy and Embryology

On completion of the course, students are able to:

1. Learn about meristematic and permanent tissues in roots and shoots.
2. Understand the anatomy of dicot and monocot roots, stems, and leaves.
3. Comprehend the adaptive and protective role of various anatomical structures like epidermis, cuticle, and stomata.
4. Explore vascular cambium activity and wood formation in roots and stems.
5. Examine irregular growth patterns in *Boerhaavia* and *Dracaena*.
6. Analyze flower structure, pollen development, and ovule structure for reproduction.
7. Understand pollination mechanisms, fertilization process, and seed structure.

Course Name – DSC-1B: Plant Physiology and Metabolism

On completion of the course, students are able to:

1. Gain insights into plant-water relations, mineral nutrition, and phloem translocation.
2. Understand the mechanisms of photosynthesis, respiration, and enzyme functions.
3. Explore nitrogen metabolism and its importance in plant growth.

4. Learn about plant growth hormones and their roles in growth and development.
5. Understand how plants respond to light and temperature variations, with practical applications.
6. Apply knowledge in agriculture and horticulture for improved crop production and management.
7. Develop a comprehensive understanding of plant physiology fundamentals for various fields of study and applications.

Course Name – SEC-I: **Biofertilizer**

On completion of the course, students are able to:

1. Learn about different fertilizers, their pros and cons, and the role of biofertilizers in agriculture.
2. Understand the symbiotic relationship between *Rhizobium* and plants, and the benefits of actinorrhizal symbiosis.
3. Gain insights into the isolation, multiplication, and application of beneficial microbes like *Azospirillum*, *Azotobacter*, and phosphate-solubilizing organisms.
4. Learn about the nitrogen-fixing abilities of cyanobacteria and the mutualistic relationship between plants and mycorrhizal fungi.
5. Get acquainted with green manuring, composting methods, and the principles of organic farming.

Course Name – SEC-II: **Gardening and Floriculture**

On completion of the course, students are able to:

1. Understand the historical significance, and scope of landscape gardening and floriculture, including landscaping techniques for various settings.
2. Learn essential gardening operations such as soil laying, manuring, watering, pest and disease management, propagation techniques, and pruning.
3. Explore principles and elements of garden designs, different garden types (formal, informal, English, Mughal, Japanese), and various garden features including famous gardens in India.

4. Gain knowledge of sexual and vegetative methods of propagation, along with the role of plant growth regulators.
5. Study a wide range of ornamental plants, including flowering annuals, perennials, shrubs, climbers, trees, bulbous plants, palms, cycads, and bonsai, as well as factors affecting commercial floriculture and cultivation techniques for important flower crops.

B.Sc. 3rd Year

Course Name – DSE-1A: Economic Botany &Biotechnology

On completion of the course, students are able to:

1. Gain comprehensive knowledge about cultivated plants, including their origins, morphology, and uses.
2. Explore cereals, pulses, vegetables, spices, beverages, oils, sugar, fiber yielding plants, and medicinal plants.
3. Understand fundamental concepts such as tissue culture techniques and micropropagation.
4. Learn about gene transfer, transgenic plants, and molecular diagnostics.
5. Discover practical applications of biotechnology in agriculture, horticulture, and forestry.
6. Develop a deeper understanding of plant science, including biotechnological advancements.
7. Prepare for applying learned concepts in real-world scenarios, contributing to advancements in agriculture and biotechnology.

Course Name – DSE-1B: Cell and Molecular Biology

On completion of the course, students are able to:

1. Understand the working and principle of various techniques (Microscopy and X-ray Diffraction etc.).
2. Grasp fundamental concepts of cell theory, cell structure, and types.
3. Understand the structures and roles of major cell organelles, such as mitochondria, chloroplasts, ER, Golgi body, lysosomes, peroxisomes, and nucleus.

4. Gain insight into cell membrane functions, structures, fluidity, selective permeability, and the composition of the cell wall.
5. Understand the cell cycle, mitosis, meiosis, and the molecular mechanisms governing cell division through check points.
6. Familiar with types of genetic material, DNA discovery, replication mechanisms, transcription mechanisms, RNA structures, types, translation and its mechanism.
7. Learn about gene regulation mechanisms in both prokaryotes and eukaryotes at various levels *i.e.* transcription, translation, post transcriptional and post translational.

Course Name – SEC-I: **Medicinal Botany and Ethnobotany**

On completion of the course, students are able to:

1. Understand the historical use of medicinal herbs and introduction to indigenous systems like Ayurveda, Unani, and Siddha.
2. Explore the concept, scope, and interdisciplinary nature of ethnobotany, focusing on its relevance and the major tribal groups in India.
3. Study the diverse uses of plants by tribes, including food, intoxicants, beverages, resins, oils, and sacred plants.
4. Learn about the methodologies involved in ethnobotanical research, including fieldwork, herbarium studies, ancient literature, archaeological findings, and sacred sites.
5. Understand the medicinal significance of key plants in ethnobotanical practices, along with their habitats and morphology, and explore the role of ethnobotany in modern medicine through examples like *Rauvolfia sepentina* and *Taxus wallichiana*.

Course Name – SEC-II: **Mushroom Cultivation Technology**

On completion of the course, students are able to:

1. Explore the history, nutritional, and medicinal value of edible mushrooms, including their protein, amino acid, mineral, carbohydrate, fiber, and vitamin content, as well as considerations regarding poisonous varieties.
2. Understand the necessary infrastructure and equipment for mushroom cultivation, including substrates, polythene bags, inoculation tools, culture racks, and low-cost

stove options, along with techniques for maintaining pure cultures.

3. Learn cultivation techniques for *Agaricus bisporus*, *Pleurotus sp*., and *Volvoriella volvacea*, including composting technology, low-cost methods, and factors influencing mushroom bed preparation.
4. Explore short-term and long-term storage methods for mushrooms, including refrigeration, canning, pickling, drying, and storage in salt solutions.
5. Understand the types of foods prepared from mushrooms, and learn about research centers, marketing strategies, cost-benefit ratios, and export potential.
6. Gain insights into common diseases and pests affecting mushroom cultivation, along with preventive measures and management strategies.

Bachelor of science - Zoology

PROGRAMME OUTCOME

PO1: Students learn about animal sciences and comprehend the diversity and intricate relationships among different living things.

PO2: Examine the complex evolutionary histories of numerous species belonging to distinct phyla and their interrelationships.

PO3: Gain knowledge of the relationships between organ systems and animal physiological processes.

PO4: Advancement of the understanding of animal evolution.

PO5: Learn about small-scale businesses such as aquaculture, fish farming, beekeeping, and sericulture.

PO6: Recognizes the principles of genetics and how they relate to human health.

PO7: Utilize what they have learned and comprehended about animal science in their daily lives.

COURSE OUTCOMES

FIRST YEAR
DSC
ZOOL 101: Animal Diversity

- To educate students about different levels of biological diversity, the basic characteristic features and classification of different phyla including both invertebrates and vertebrates and the evolutionary links between them.
- To impart knowledge regarding unique features of various phyla such as Canal system, polymorphism, metamerism, torsion, water vascular system etc.
- To introduce students to parasitic adaptations and life history, mode of transmission and pathogenecity of important parasitism, parasites.
- To acquaint students to the concepts of osmoregulation in fishes and parental care in mammals, as well as educate them to differentiate between poisonous and non-poisonous snakes.

DSC

ZOOL 102: Comparative Anatomy and Developmental Biology of Vertebrates

- To provide knowledge regarding the comparative anatomy among the vertebrates.
- To impart in depth understanding about the evolutionary history of visceral arches, heart, aortic arches and urinogenital ducts among the vertebrates.
- To introduce students to the fundamentals of developmental biology including the concepts of gametogenesis, vitellogenesis, external and internal fertilization and control of development.
- To provoke the curiosity among the students towards the early development of embryo in frog and mammals and equip them with the knowledge of egg maturation, patterns of cleavage, formation of blastula and gastrula and the fate map of three germinal layers.
- To educate students about the implantation of embryo in human along with the types of placenta in mammals.

SECOND YEAR

DSC

ZOOL 201 :Physiology and Biochemistry

- To educate students about the structure of skeletal muscle and neuron along with the origin and propagation action potential and the molecular as well as chemical basis of muscle contraction.
- To impart knowledge regarding the working physiology of various fundamental systems of human body including digestive, respiratory, cardiovascular and excretory systems.
- To arouse the curiosity among students about the control and coordination of endocrine glands and reproduction in humans.
- To educate students regarding the working of metabolic pathways of macromolecules in human body and the role of enzymes in inhibition and regulation of these pathways.

DSC

ZOOL 202 :GENETICS AND EVOLUTIONARY BIOLOGY

- To make them understand Mendel's principle, its extension and chromosomal basis.
- To impart knowledge regarding the chromosomal & gene mutations and their types.
- To develop the concept of linkage, crossing over and chromosomal mapping and chromosomal mechanisms in sex determination.
- To enhance their curiosity about the major events in history of life and the theories & evidences given by various scientists in support of evolution.
- To explain the species concept and modes of speciation and to make them understand the macro-evolutionary principles and causes of mass extinction.

SEC (SKILL ENHANCEMENT COURSE)
ZOOL 203 : MEDICAL DIAGNOSTICS

- To introduce students to medical diagnostics, its importance and terminology used.
- To develop the concept of infectious and non-infectious diseases, their causes, symptoms, diagnosis and preventive measures.
- To make them capable to differentiate between infectious and non-infectious diseases and spread awareness regarding the importance of diagnosis in treating these diseases.
- To impart knowledge regarding tumors and its types, detection and metastasis.

SEC (SKILL ENHANCEMENT COURSE)
ZOOL 204 :APICULTURE

- To provide knowledge about the history, classification and biology of Honey Bees and products of apiculture industry and its Uses
- To educate them about artificial Bee rearing, Beehives, selection of Bees for apiculture and the methods of extraction of honey.
- To describe students about Bee diseases and enemies as well as the control and preventive measures.
- To introduce students to Bee keeping industry and modern methods employed in artificial Beehives for cross pollination in horticulture gardens.

THIRD YEAR
DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 301 A :APPLIED ZOOLOGY

- To familiarize students with host parasite relationships and transmission, prevention and control measures of various diseases.
- To explain the life histories of pathogenic protozoa and helminthes to enable students to identify a cause of infections and preventive measures to avoid spread of diseases.
- To impart knowledge on biology and control of insects of economical and medical importance.

- To familiarize students with concept of animal husbandry, genetic improvements in aquaculture industry and principles of poultry farming, management of breeding stocks, processing and preservation of eggs.

DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 301B ANIMAL BIOTECHNOLOGY

- To introduce students to concept and scope of biotechnology.
- To provide knowledge based upon molecular techniques including cloning vectors, restriction enzymes, construction of genomic and cDNA, DNA sequencing and other related techniques used in Gene manipulation.
- To familiarize students with methods of production of transgenic animals and plants and their applications in pharmaceuticals and agriculture.
- To enable them to understand molecular diagnosis of genetic diseases and the scope of recombinant DNA in medicines.
- To develop the skills of isolation of genomic and Plasmid DNA form *E. coli* and construction of circular and linear restriction map from the provided data.

DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 301 C : AQUATIC BIOLOGY

- To familiarize students with various aquatic biomes and origin, classification and physic-chemical characteristics of freshwater ecosystems with special reference to lakes and streams.
- To provide knowledge regarding salinity and density of Sea water, Continental shelf, Adaptations of deep sea organisms.
- To enable students to understand causes of aquatic pollution, management & conservation and sewage treatment.
- To enable the students to identify the important macrophytes, phytoplanktons and zooplanktons present in a lake ecosystem.
- To develop the ability to determine the quality of water collected from any water body.

DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 302 A : INSECT, VECTORS AND DISEASES

- To acquaint students with general features of insects and enable them to identify insects on the basis of morphological features such as types of antennae and mouth parts with respect to feeding habits.
- To impart knowledge regarding mosquito-borne diseases, the life cycle of vectors, mode of infection and control measures.
- To enable students to understand causes of flea-borne diseases and the control measures.

- To explain louse-borne diseases, their control measures and bugs as insect vectors.

DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 302 B :IMMUNOLOGY

- To provide students with knowledge of basic fundamentals of immunological processes and to promote the ability to trace the immunological history of a disease.
- To impart knowledge regarding the importance of innate and adaptive immunity and difference between them.
- To educate students regarding the crucial role of B and T cells and complement system in immune system.
- To provide knowledge regarding Structure, classes and function of antibodies, monoclonal antibodies, antigen antibody interactions as tools for research and diagnosis.

DSE (DISCIPLINE SPECIFIC ELECTIVE)
ZOOL 302C : REPRODUCTIVE BIOLOGY

- To familiarize students with fundamentals of reproductive endocrinology including the development of reproductive system in an embryo and the mechanism of sex determination.
- To impart knowledge regarding anatomy of male reproductive system, process of spermatogenesis and its hormonal regulation.
- To educate students about the anatomy of female reproductive system, process of oogenesis, interaction of oocyte with follicles and hormonal regulation of oogenesis.
- To provide knowledge regarding the reproductive cycles in rat and human and their regulation, the process of fertilization, implantation, pregnancy and mechanism of parturition with its hormonal regulation.
- To educate students about causes and diagnosis of male and female infertility.
- To create awareness among the students regarding Assisted Reproductive Technology and modern contraceptive technologies.

SEC (SKILL ENHANCEMENT COURSE)
ZOOL 303 : SERICULTURE

- To introduce students to sericulture, its history and present status.
- To educate students about the types of silkworm, life cycle of *Bombyx mori* and the secretion of silk through silk glands.
- To impart knowledge about the requirements for establishment of sericulture industry, its process including mulberry cultivation, silkworm rearing technology, and the process of storage and spinning of cocoons.
- To acquaint students to the pests of silkworm, pathogenic diseases, their control and prevention.

- To create awareness among the students about the prospects of sericulture industry, employment and it's potential.

SEC (SKILL ENHANCEMENT COURSE)
ZOOL 304 A : AQUARIUM FISH KEEPING

- To introduce students to aquarium fish keeping, explain them the biology of aquarium fishes
- To impart students with the ability to identify various marine and freshwater aquarium fishes.
- To educate them about the general maintenance of aquarium, process of formulating fish feed, techniques of transportation of live fish and the precautions taken.
- To provide knowledge about the budget for setting up an aquarium fish farm and the potential scope of Aquarium fish industry as a Cottage industry.

SEC (SKILL ENHANCEMENT COURSE)
ZOOL 304 B : RESEARCH METHODOLOGY

- To familiarize students with foundations of research, its types and important concepts related to research designs.
- To enable students to identify a research problem, determine experimental and sample designs.
- To impart knowledge on methods of data collection and presentation using digital technology.
- To develop data analysis skills and interpretation of data to solve the research problem and
- To enable students to develop skills of technical report and thesis writing.
- To develop an understanding of the ethical issues conducting applied research, intellectual property rights, copy right, Plagiarism, commercialization and patent

Course outcome

Aman kumar

Deptt. Of chemistry

G.C Chowari – 176302

Session 2024-2025

Atomic structure and bonding ,general organic chemistry $ aliphatic hydrocarbons

CHEM101TH

Atomic structure

A. Deep knowledge of atomic structure can be very useful for new discoveries about atoms . From electronic configuration knowledge of atom new molecules can be discovered .

B. Chemical bonding and molecular structure

By the knowledge of ionic bond i.e bond which is formed when atom loose electrons to get noble gas configuration and other atom gains .Then after cation and anion formed combine to form ionic bond . In this way new ionic compounds can be formed . From the knowledge of covalent bond i.e bond formed by sharing of electrons such that all atoms of molecules formed complete their octet required 2 or 8 electrons around them . From this knowledge new molecules having covalent bonds can be discovered . From the knowledge of MOT new molecules can be discovered . Also VSEPR theory can be very useful for discovering new molecules .

C. Fundamentals of organic chemistry

From knowledge of fundamentals of organic chemistry one can understand organic chemistry. Also fundamentals of organic chemistry is very useful for understanding reaction mechanism.

D. Steriochemistry

Steriosomers are molecules having same molecular formula but different arrangement of atoms of groups in space . Knowledge of stereochemistry is very necessary for understanding reaction mechanism .

For e.g during dehydrohalogenation of alkyl halides molecules having H and X in trans position are dehydrohalogenated easily then alkyl halides having H and X at cis position to eachother .

E. Aliphatic hydrocarbons { Alkanes , Alkenes $ Alkynes }

Alkanes have general formulae CnH2n+2 n= 1,2,3,4.....From knowledge of alkanes and mechanism of their reactions new products can be formed. Alkanes can be very useful in medecines .

Alkenes have general formulae CnH2n . n=2,3,4.....Alkenes undergoes electrophilic addition reactions since alkenes are source of pi electrons and electrophiles are electron loving .This knowledge can be used for forming new compounds of alkenes . Alkenes and product formed from them can be useful for medicinal purpose.

Alkynes undergoes electrophilic addition reactions . From this knowledge new compounds of alkynes can be formed. Terminal alkynes are acidic in nature . So from this knowledge new compound from terminal alkynes can be formed. CnH2n-2, n=2,3,--- is general formula of alkynes.

CHEM201TH

From solutions chapter knowledge one can prepare solutions of desired concentrations . From knowledge of Raults law we can calculate partial vapour pressure of any copmponent from solution of volatile liquids . We can also make ideal and non ideal solutions . We can know properties of ideal and non ideal solutions .

A. Conductance

From the knowledge of conductance chapter we can use different concept of conductance for conductance purposes .

B. Electrochemistry

From the knowledge of electrochemistry we can make different kinds of cells e.g voltic cell , daniell cell , electrolytic cell. Also different kinds of electrodes & concentration cells can be formed . Potentiometric titrations can be used for estimation of substance in solution by the measurement of potentials .

C. Carboxylic acid and carboxylic acid derivatives.

Carboxylic acids can be used for making different kinds of compounds which can be used for medicinal purposes , cosmetics etc. From the knowledge of mechanism of reaction of carboxylic acid we can discover new compounds of carboxylic acids . Carboxylic acid

derivatives undergo nucleophilic substitution reactions . From this knowledge we can make and discover new compounds by nucleophilic substitution reactions of carboxylic acid derivatives .

D. Amines and diazonium salts

From amines and diazonium salts different kinds of compounds can be formed which can be useful for medicinal purpose . Dyes can be prepared from diazonium salts. Also from the knowledge of reaction mechanism their new product can be discovered .

E. Carbohydrates

Carbohydartes provides us eatable compounds and to other living beings . For e.g glucose , fructose , sucrose etc From carbohydrates alcohols can be prepared . Many other compounds can also be produced from carbohydartes .

CHEM 203TH

A. "Analytical chemistry "

Soil analysis is important branch of chemistry from which proper agriculture can be done.

B. Analysis of water is very important from it we can determine purity of water . By analysis and sampling of water we get pure water for use .

C. From food analysis we can get good and healthy food for use .

D. Cosmetics is a branch of analytical chemistry which provide products which can make living beings life better.

POLYMER CHEMISTRY

Polymer chemistry is very important branch of chemistry which provide us many important polymers . For e.g P.E , PVC , PAN , SAN , BUNA-S , PAA , PMAA , PMA , PTFE , Nylon 6 , Nylon 10 , Nylon 11 ,Synthetic rubbers , Polycarbonates etc .

Many conducting polymers are also available from polymer chemistry . For e.g, Polyacetylene , PANI ,Polypyrole, Polythiophene , Poly (P-Phenylene sulphide). These polymers are very useful for human beings .

Chemical technology and society and business skills for chemistry

CHEM 307TH

A Chemical technology

Distillation process can be used to purify many compounds. Exturders can also be used to create objects of fixed cross sectional profile. Pumps and mills can also be used.

B Society and chemical prospective

Many renewable sources of energy can be generated. Human beings can use solar energy for many purposes. Fossil fuels can be used as source of energy. Nuclear fission can be used as another source of energy. From deep knowledge of proteins new proteins can be discovered which can be useful for human beings. Research about DNA or RNA can be very useful.

C Business basics and chemistry in industry.

Business can be planned in such a way that one can get more income but less expenditure. Chemistry is very important in industry For e.g, in pharmaceutical. From chemistry human beings and other living beings can be very beneficial. Chemistry is very important for global economic growth .

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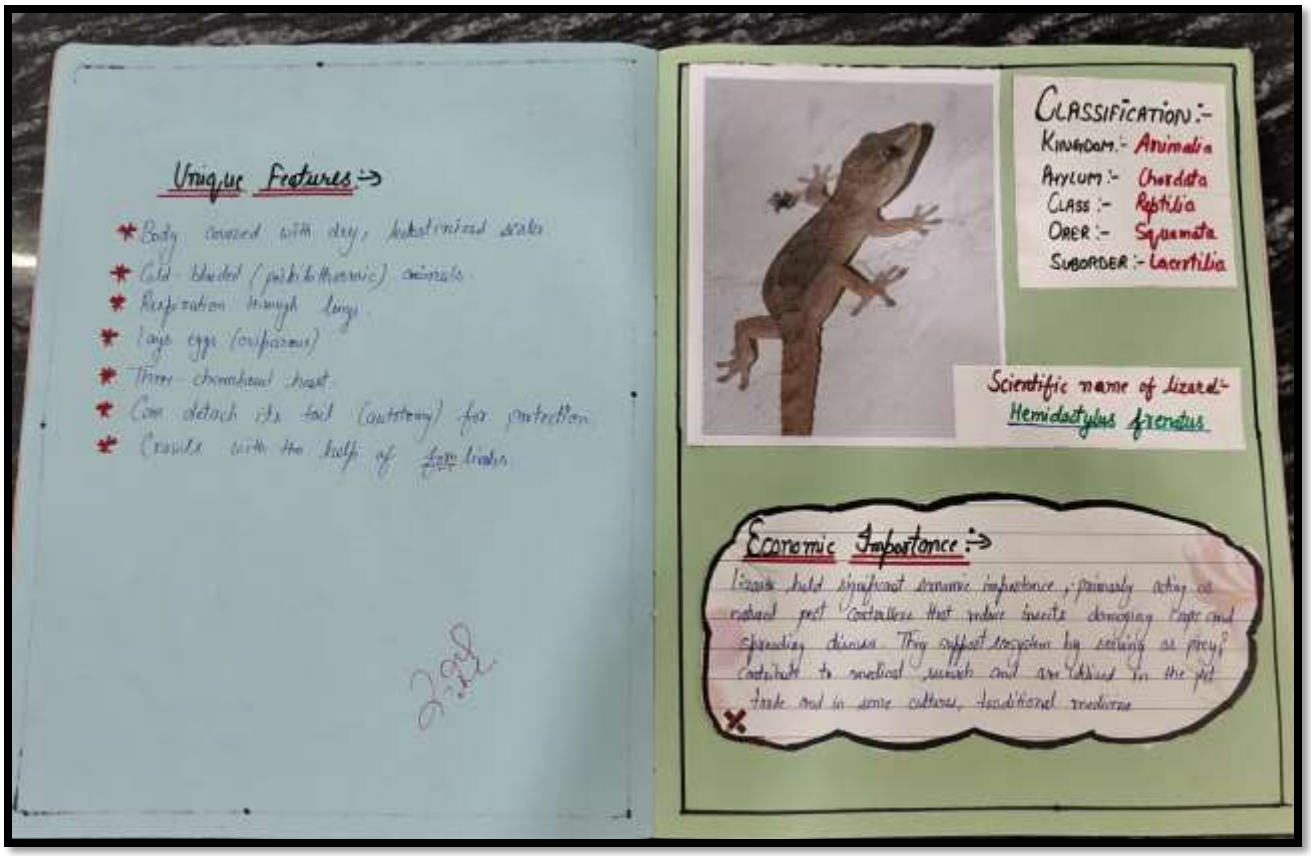
1.2.3 Curriculum enrichment practices

Projects: Photo album prepared by students of Zoology department



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Socio-economic survey conducted by students of Geography department

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Department of Geography
Government Degree College Chowari

Field Report (2024-2025)

Course: Field Technique and Survey BasedReport (Practical)

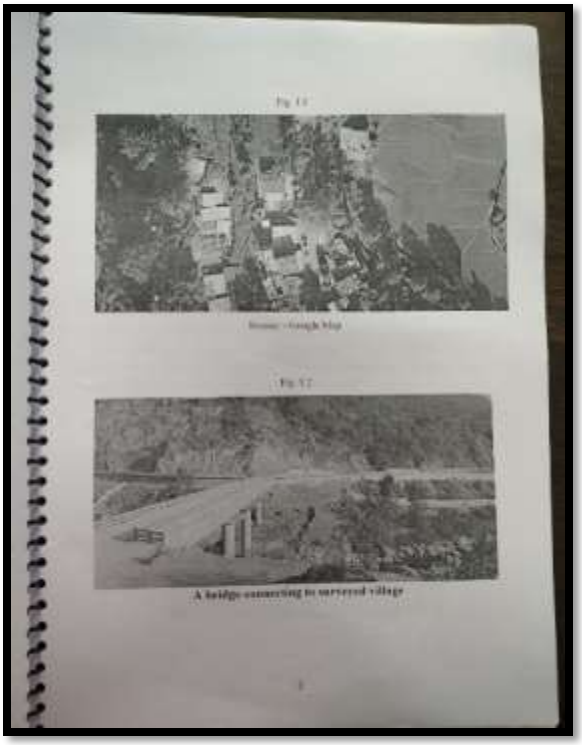
Course Code: (GEOGP302SEC)

Session: 2024-2025

Submitted By: ...

University Roll No ...

Submitted To: DikshaKumari



A bridge connecting to surveyed village

Department of Geography
Government Degree College Chowari

Field Report (2024-2025)

Course: Field Technique and Survey Based Report (Practical)

Course Code: (GEOGP302SEC)

Session: 2024-2025

Class Roll No - 214122

Submitted By: ...

University Roll No ...

Submitted To: Diksha Kumari

No. EDN- GCChowari Dated:
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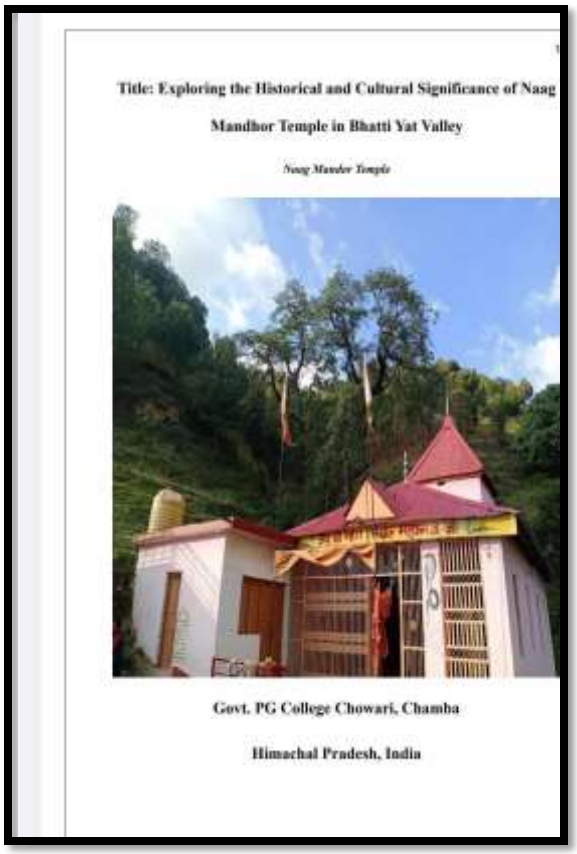
Project report prepared by students of English department

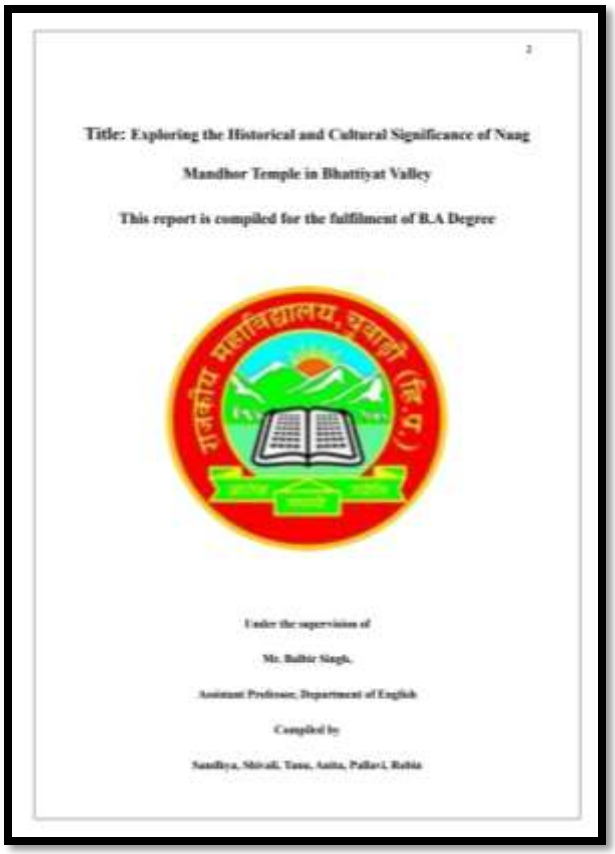


Title: Exploring the Historical and Cultural Significance of Naag Mandhor Temple in Bhatti Yat Valley

Naag Mandor Temple

Govt. PG College Chowari, Chamba

Himachal Pradesh, India



Title: Exploring the Historical and Cultural Significance of Naag Mandhor Temple in Bhattiyat Valley

This report is compiled for the fulfilment of B.A Degree

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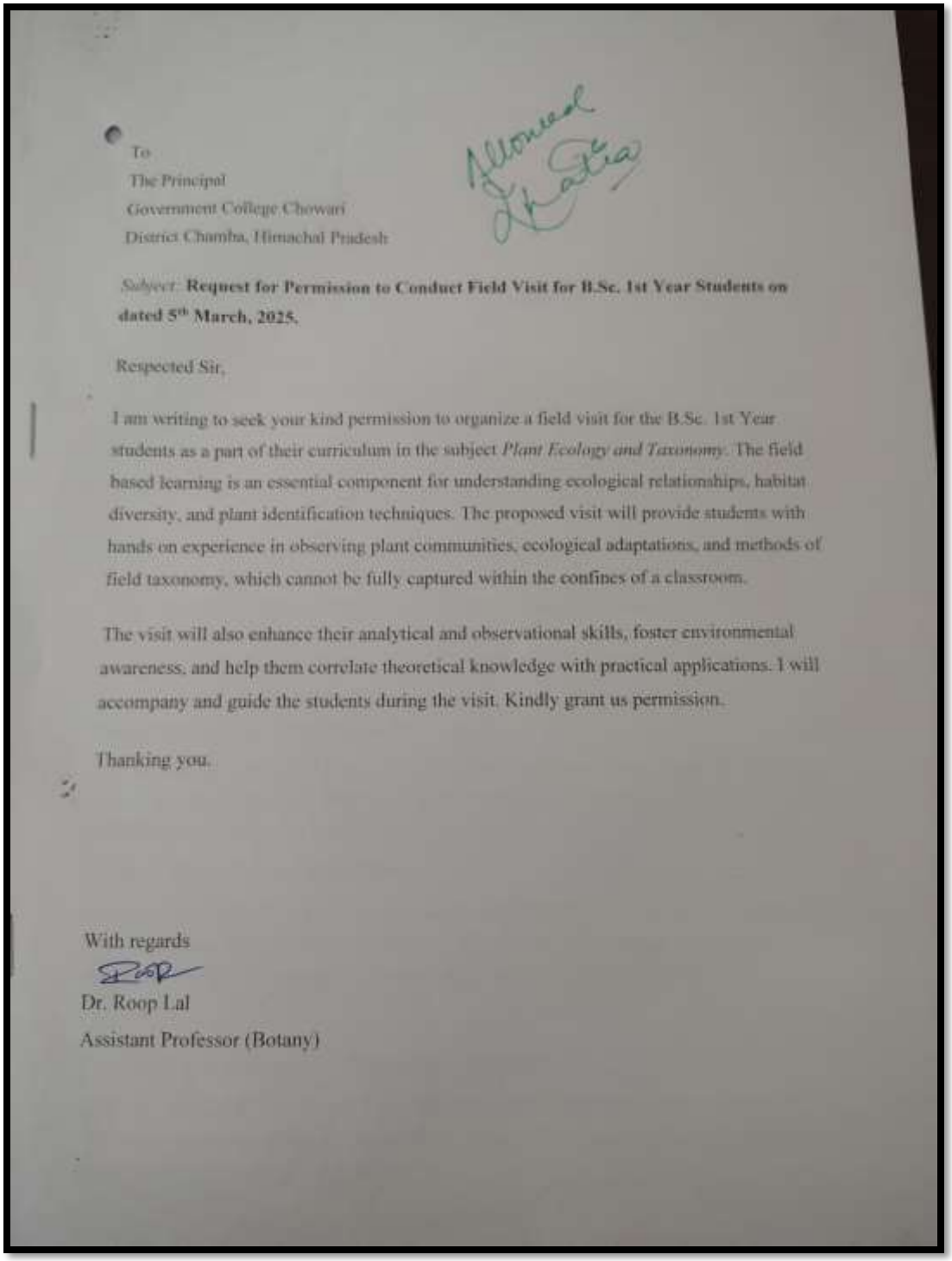
Field visit report by botany department

Field Visit Report



To
The Principal
Government College Chowari
District Chamba, Himachal Pradesh

Allowed
Thakur

Subject: **Request for Permission to Conduct Field Visit for B.Sc. 1st Year Students on dated 5th March, 2025.**

Respected Sir,

I am writing to seek your kind permission to organize a field visit for the B.Sc. 1st Year students as a part of their curriculum in the subject *Plant Ecology and Taxonomy*. The field based learning is an essential component for understanding ecological relationships, habitat diversity, and plant identification techniques. The proposed visit will provide students with hands on experience in observing plant communities, ecological adaptations, and methods of field taxonomy, which cannot be fully captured within the confines of a classroom.

The visit will also enhance their analytical and observational skills, foster environmental awareness, and help them correlate theoretical knowledge with practical applications. I will accompany and guide the students during the visit. Kindly grant us permission.

Thanking you.

With regards

Dr. Roop Lal
Assistant Professor (Botany)

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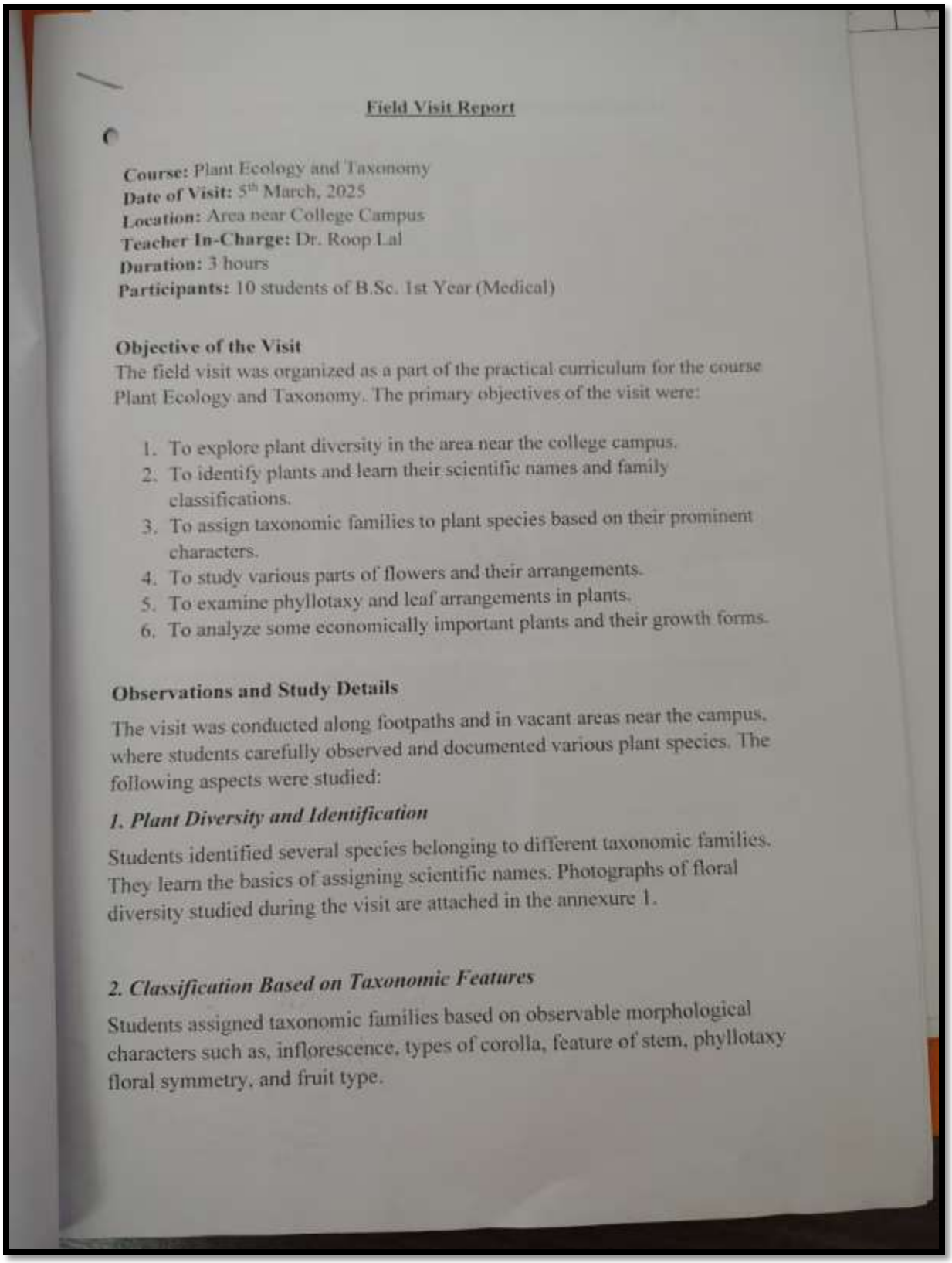
Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com



Field Visit Report

Course: Plant Ecology and Taxonomy
Date of Visit: 5th March, 2025
Location: Area near College Campus
Teacher In-Charge: Dr. Roop Lal
Duration: 3 hours
Participants: 10 students of B.Sc. 1st Year (Medical)

Objective of the Visit

The field visit was organized as a part of the practical curriculum for the course Plant Ecology and Taxonomy. The primary objectives of the visit were:

1. To explore plant diversity in the area near the college campus.
2. To identify plants and learn their scientific names and family classifications.
3. To assign taxonomic families to plant species based on their prominent characters.
4. To study various parts of flowers and their arrangements.
5. To examine phyllotaxy and leaf arrangements in plants.
6. To analyze some economically important plants and their growth forms.

Observations and Study Details

The visit was conducted along footpaths and in vacant areas near the campus, where students carefully observed and documented various plant species. The following aspects were studied:

1. Plant Diversity and Identification

Students identified several species belonging to different taxonomic families. They learn the basics of assigning scientific names. Photographs of floral diversity studied during the visit are attached in the annexure 1.

2. Classification Based on Taxonomic Features

Students assigned taxonomic families based on observable morphological characters such as, inflorescence, types of corolla, feature of stem, phyllotaxy floral symmetry, and fruit type.

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ANNEXURE-1

Photographs of so

3. Study of Flowering Plants and Their Arrangements

Students examined different flowering plants and recorded their floral features. The arrangements of floral parts were observed and noted in detail.

4. Phyllotaxy and Leaf Arrangement

The visit included an analysis of different types of phyllotaxy in various plants.

- ✓ Alternate phyllotaxy
- ✓ Opposite phyllotaxy
- ✓ Whorled phyllotaxy

5. Economically Important Plants and Growth Forms

Students studied plants with significant economic value. Additionally, Growth forms such as herbs (*Oxalis*), shrubs (*Hibiscus*), and trees (*Ficus*) were also observed and documented.

Plant samples were collected by students to prepare the herbarium sheet.

Conclusion

The field visit was a valuable hand on experience that helped students to gain a practical understanding of plant taxonomy and ecology. The identification of plant species and their classification into families allowed students to correlate theoretical knowledge with real world observations. The study of phyllotaxy, floral arrangements, and economically significant species enhanced their comprehension of plant diversity and taxonomy. Overall, the visit was successful in achieving its learning objectives and provided an enriching experience for all participants.

Recommendations

- ✓ Future visits should cover a wider area to observe more plant diversity.
- ✓ Use of field guides/Keys for plant identification can enhance learning.

Principal
Govt. College Chowari

Principal
Govt. College
Chowari (Chamba) H.P

No. EDN- GCChowari Dated:
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Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com

ANNEXURE-1

Photographs of some plants studied during the field visit

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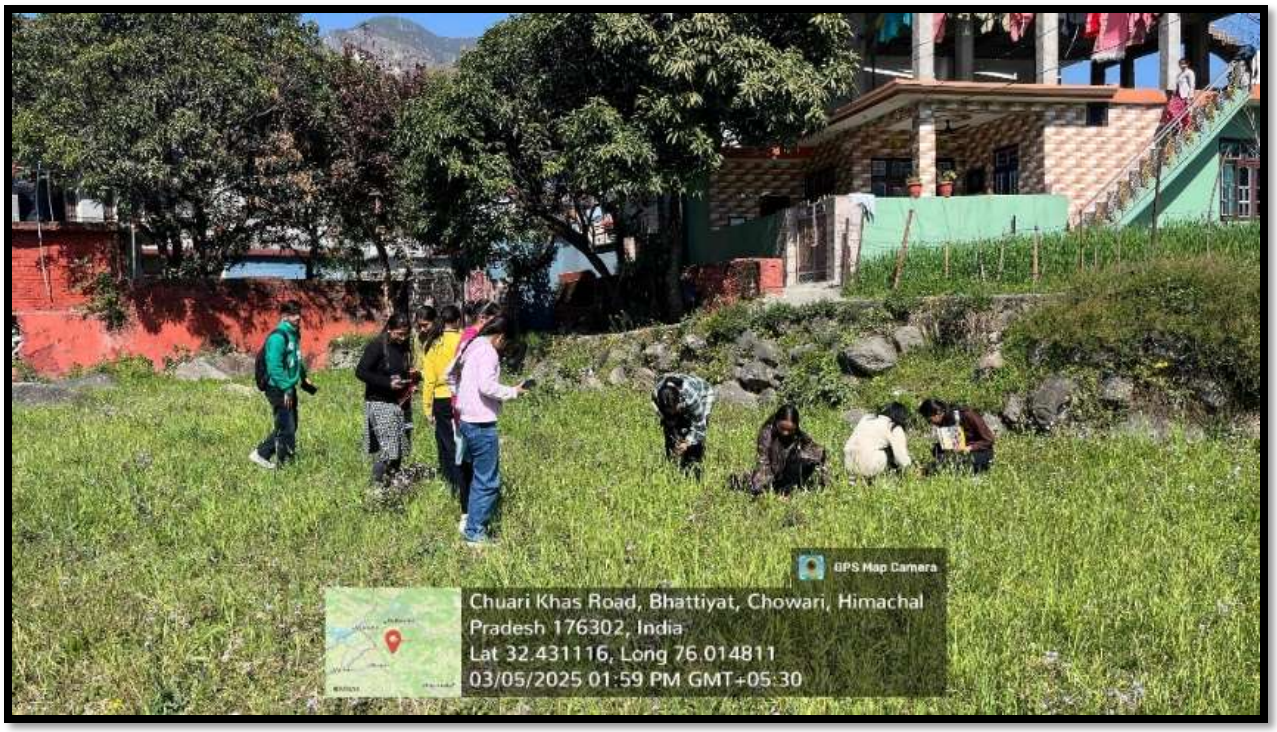
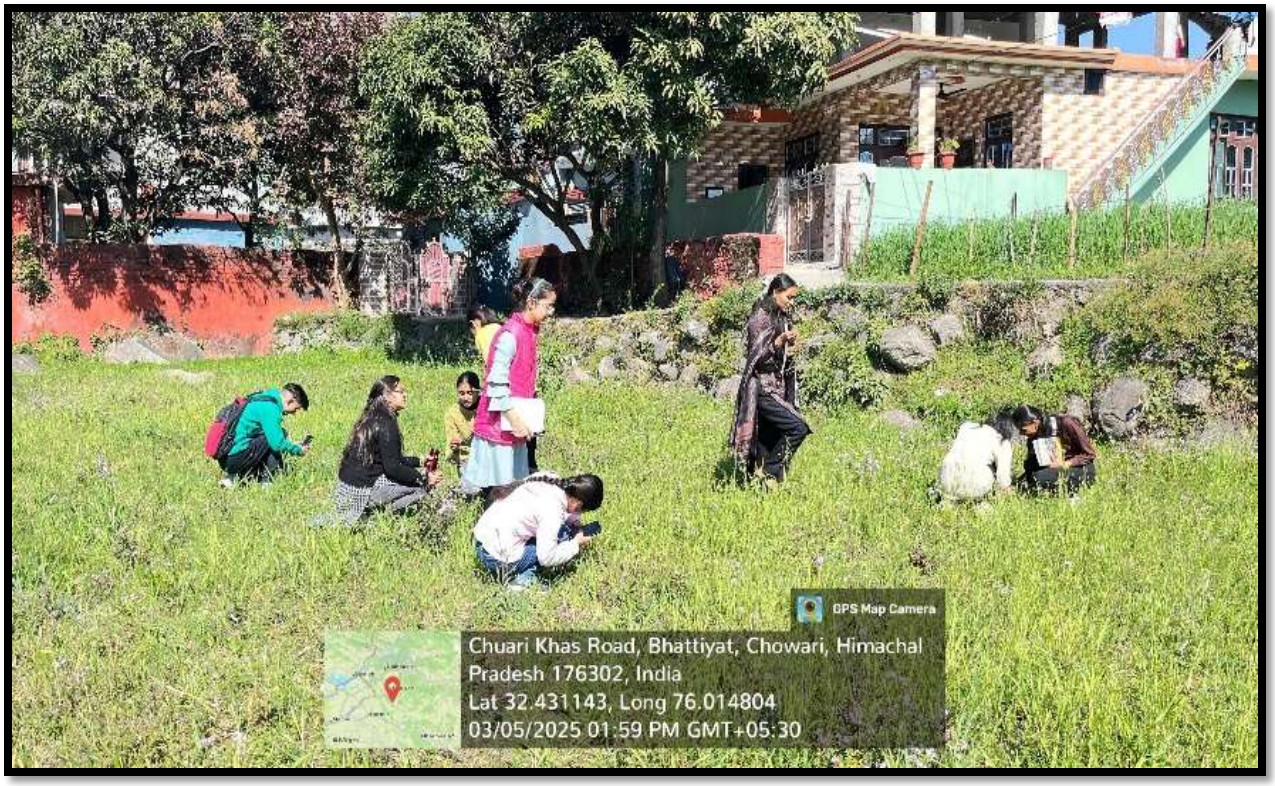
Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com





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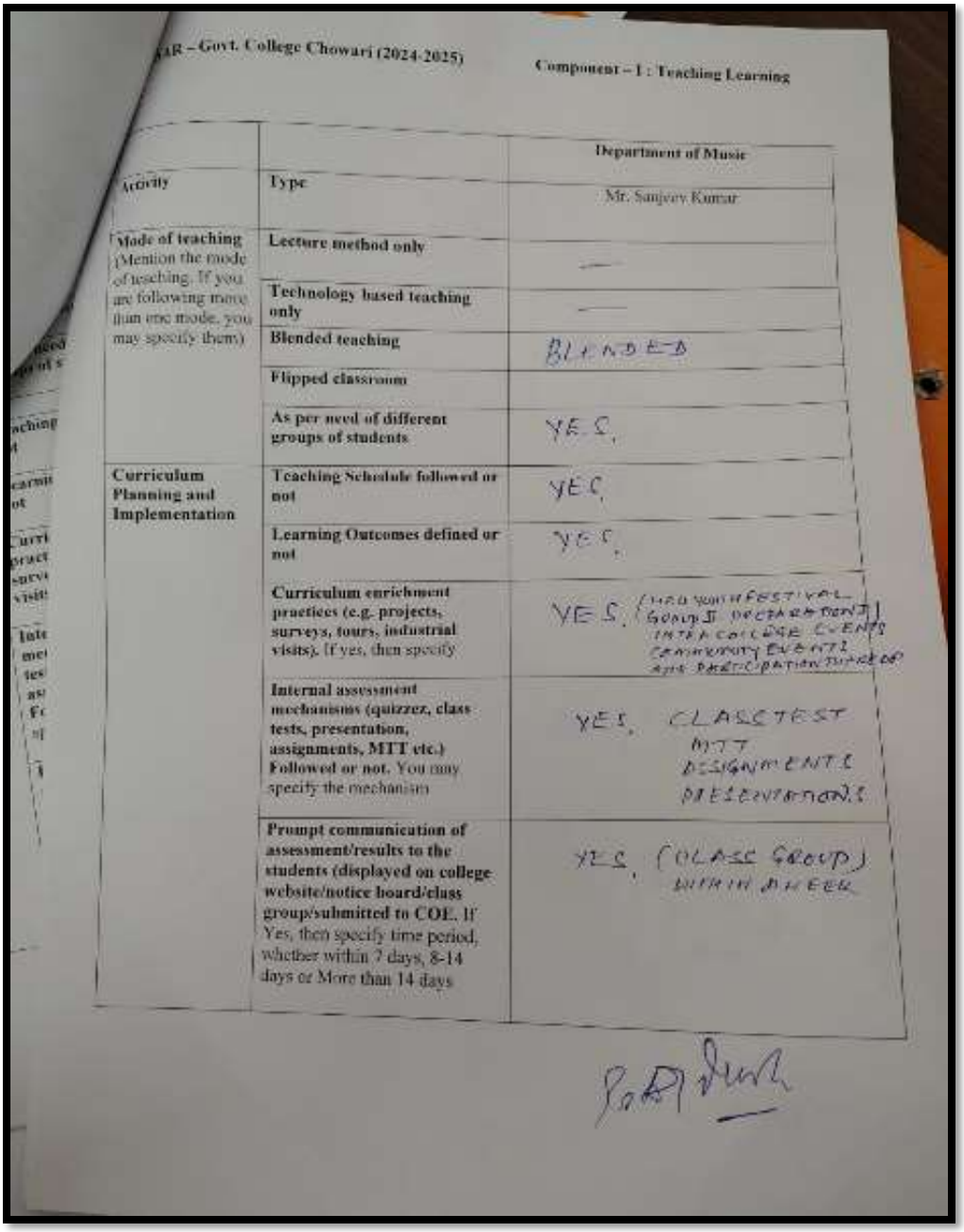
Participation in cultural activities



AR – Govt. College Chowari (2024-2025) Component – I : Teaching Learning

Activity	Type	Department of Music Mr. Sanjeev Kumar
Mode of teaching (Mention the mode of teaching. If you are following more than one mode, you may specify them.)	Lecture method only	—
	Technology based teaching only	—
	Blended teaching	BLENDED
	Flipped classroom	
	As per need of different groups of students	YES.
Curriculum Planning and Implementation	Teaching Schedule followed or not	YES.
	Learning Outcomes defined or not	YES.
	Curriculum enrichment practices (e.g. projects, surveys, tours, industrial visits). If yes, then specify	YES. (HPU YOUTH FESTIVAL GROUP SONG DECLAMATION) INTER COLLEGE EVENTS COMMUNITY EVENTS AND PARTICIPATION THEREOF
	Internal assessment mechanisms (quizzes, class tests, presentation, assignments, MTT etc.) Followed or not. You may specify the mechanism	YES. CLASS TEST MTT ASSIGNMENTS PRESENTATIONS
	Prompt communication of assessment/results to the students (displayed on college website/notice board/class group/submitted to COE. If Yes, then specify time period, whether within 7 days, 8-14 days or More than 14 days	YES. (CLASS GROUP) WITHIN A WEEK

No. EDN- GCChowari Dated:
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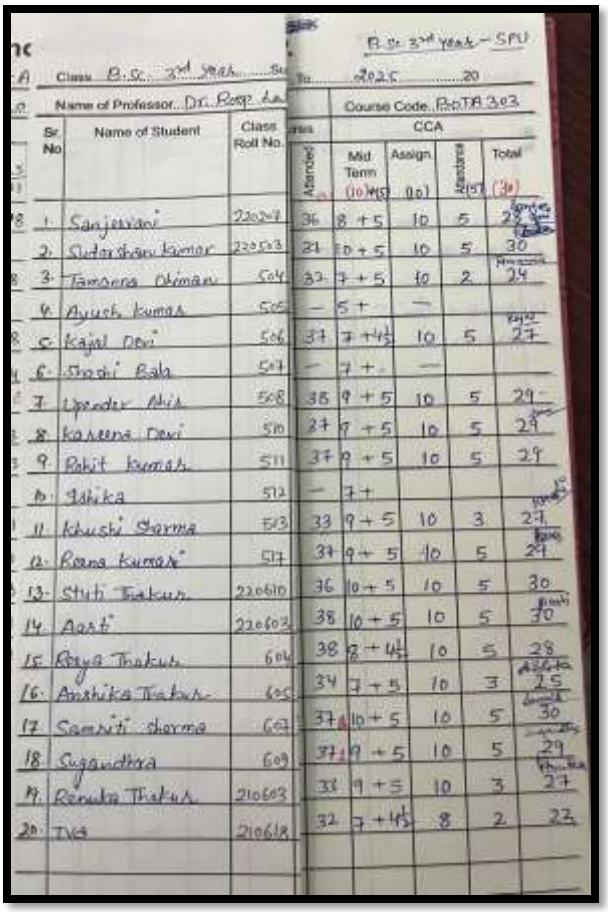
Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com

1.2.4 Internal assessment mechanism

CCA Prepared as per rules and regulations

BOTANY



B.Sc. 3rd year - SPU

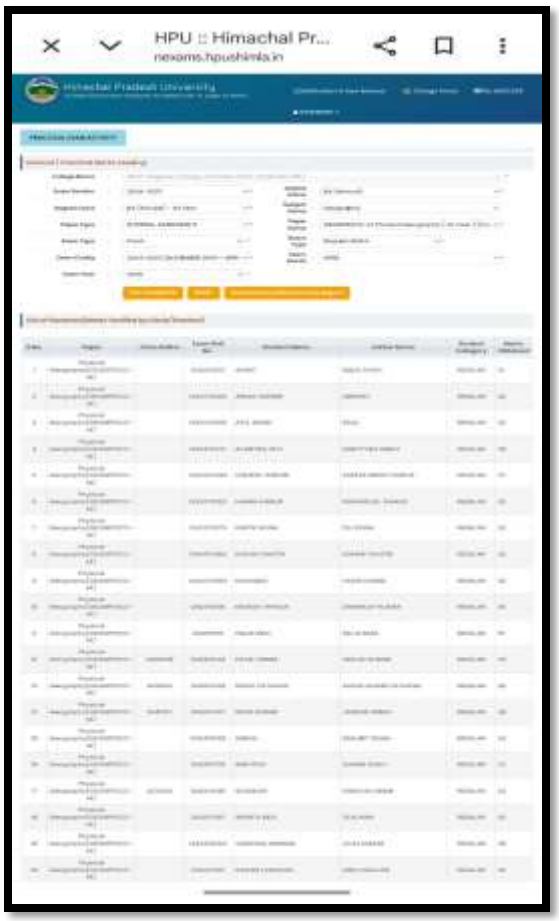
Class B.Sc. 3rd year

Name of Professor Dr. Roop La

Course Code BOTA 303

Sr No	Name of Student	Class Roll No.	Attended	Mid Term (10)	Assign (10)	Attendance (5)	Total (30)
1.	Sanjeevani	220207	36	8+5	10	5	28
2.	Sudarshan kumar	220503	31	10+5	10	5	30
3.	Tamanna Rkiman	504	33	7+5	10	2	24
4.	Ayush kumar	505	—	5+	—		
5.	Kajal Devi	506	37	7+4½	10	5	27
6.	Sruti Bala	507	—	7+	—		
7.	Upender Ahir	508	38	9+5	10	5	29
8.	Kareena Devi	510	27	9+5	10	5	29
9.	Rohit kumar	511	37	9+5	10	5	29
10.	Ishika	512	—	7+			
11.	Khushi Sharma	513	33	9+5	10	3	27
12.	Rana kumar	517	37	9+5	10	5	29
13.	Stuti Thakur	220610	36	10+5	10	5	30
14.	Aarti	220603	38	10+5	10	5	30
15.	Riya Thakur	604	38	8+4½	10	5	28
16.	Anshika Thakur	605	34	7+5	10	3	25
17.	Samriti sharma	608	37	10+5	10	5	30
18.	Sugandha	609	37	9+5	10	5	29
19.	Renuka Thakur	210603	33	9+5	10	3	27
20.	TVG	210618	32	7+4½	8	2	23

Geography



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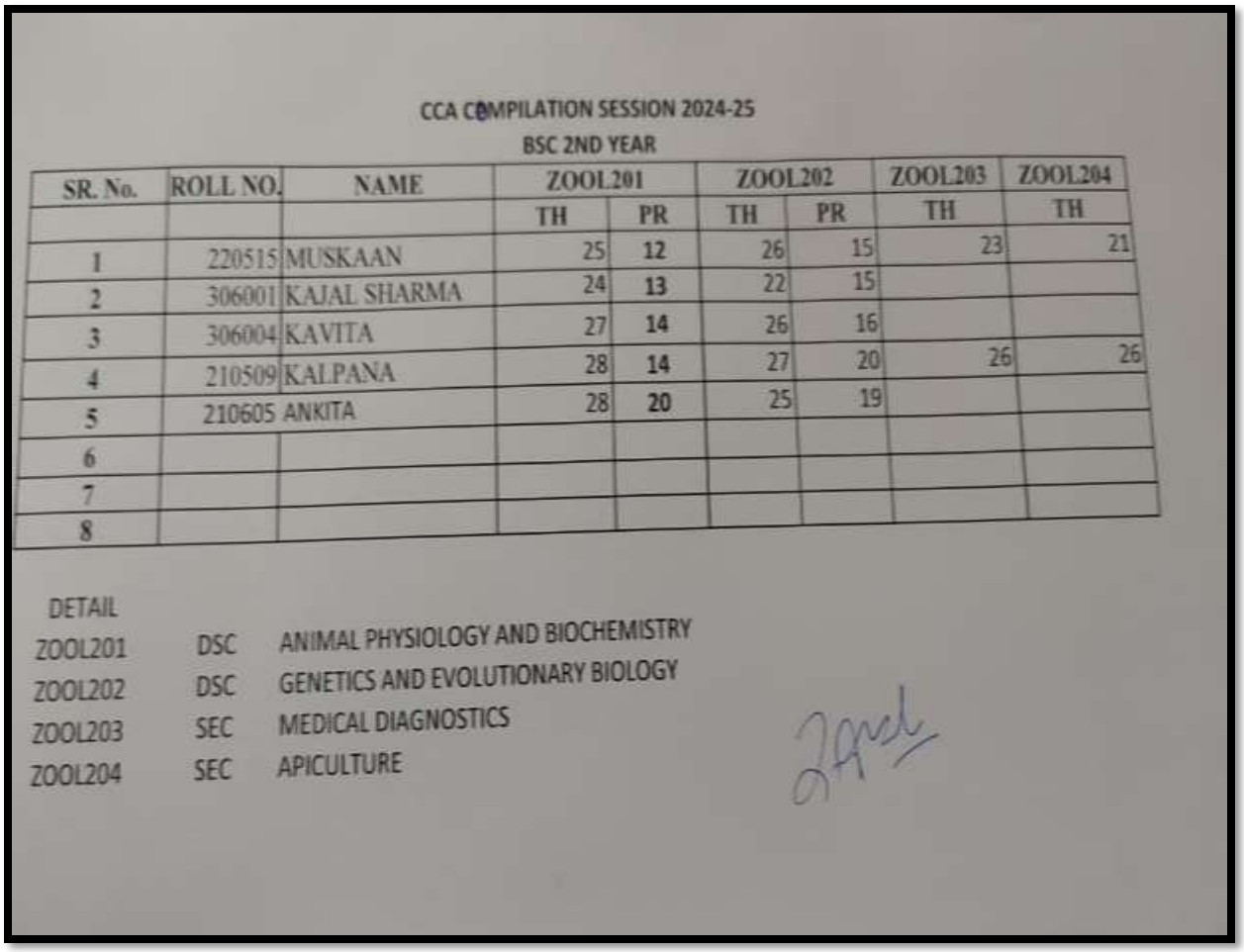
Zoology



CCA COMPILATION SESSION 2024-25

BSC 2ND YEAR

SR. No.	ROLL NO.	NAME	ZOOL201		ZOOL202		ZOOL203	ZOOL204
			TH	PR	TH	PR	TH	TH
1	220515	MUSKAAN	25	12	26	15	23	21
2	306001	KAJAL SHARMA	24	13	22	15		
3	306004	KAVITA	27	14	26	16		
4	210509	KALPANA	28	14	27	20	26	26
5	210605	ANKITA	28	20	25	19		
6								
7								
8								

DETAIL

ZOOL201	DSC	ANIMAL PHYSIOLOGY AND BIOCHEMISTRY
ZOOL202	DSC	GENETICS AND EVOLUTIONARY BIOLOGY
ZOOL203	SEC	MEDICAL DIAGNOSTICS
ZOOL204	SEC	APICULTURE

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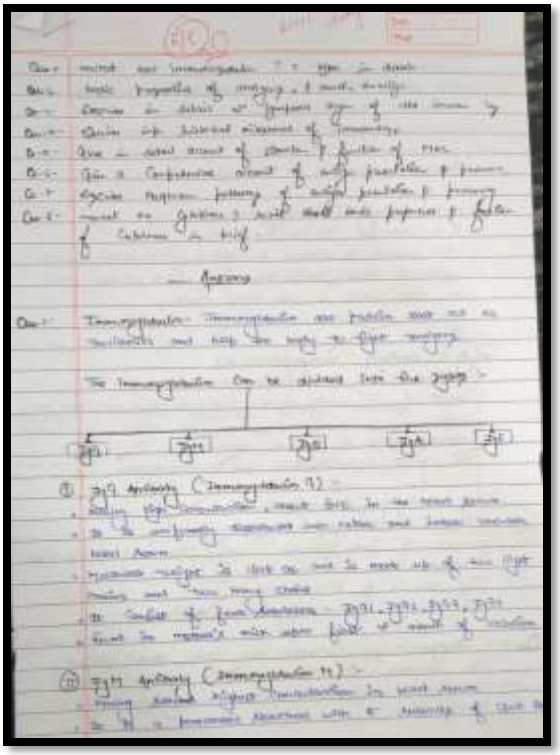
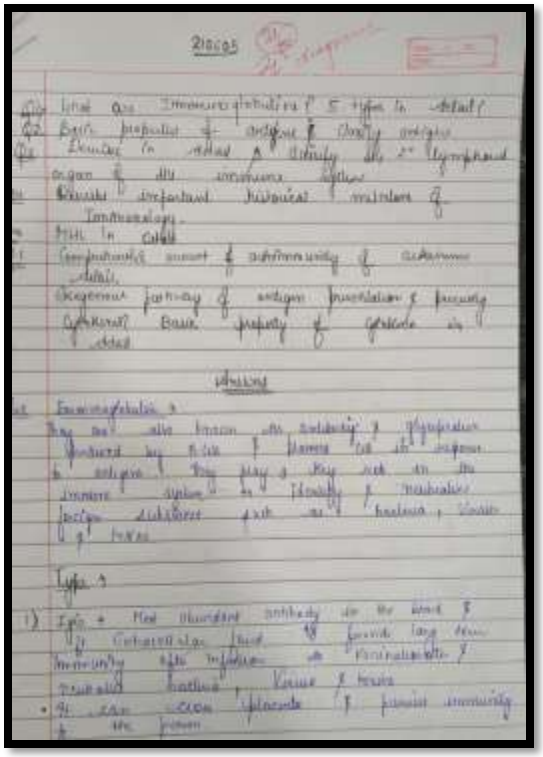
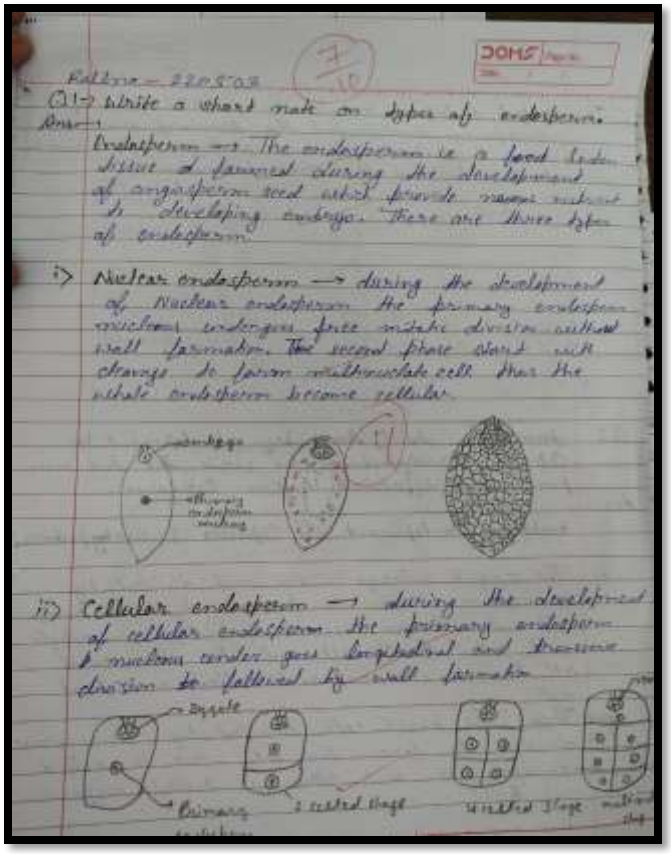
Class Tests







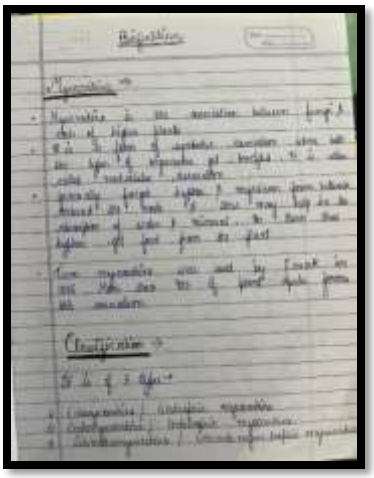
No. EDN- GCChowari Dated:
Office of the Principal, Govt. College ChowariChamba (HP)
Phone/Fax: 01899-266380 Email-ID:gcchowari2013@gmail.com

Assignments


INDEX

Assignment of Botany

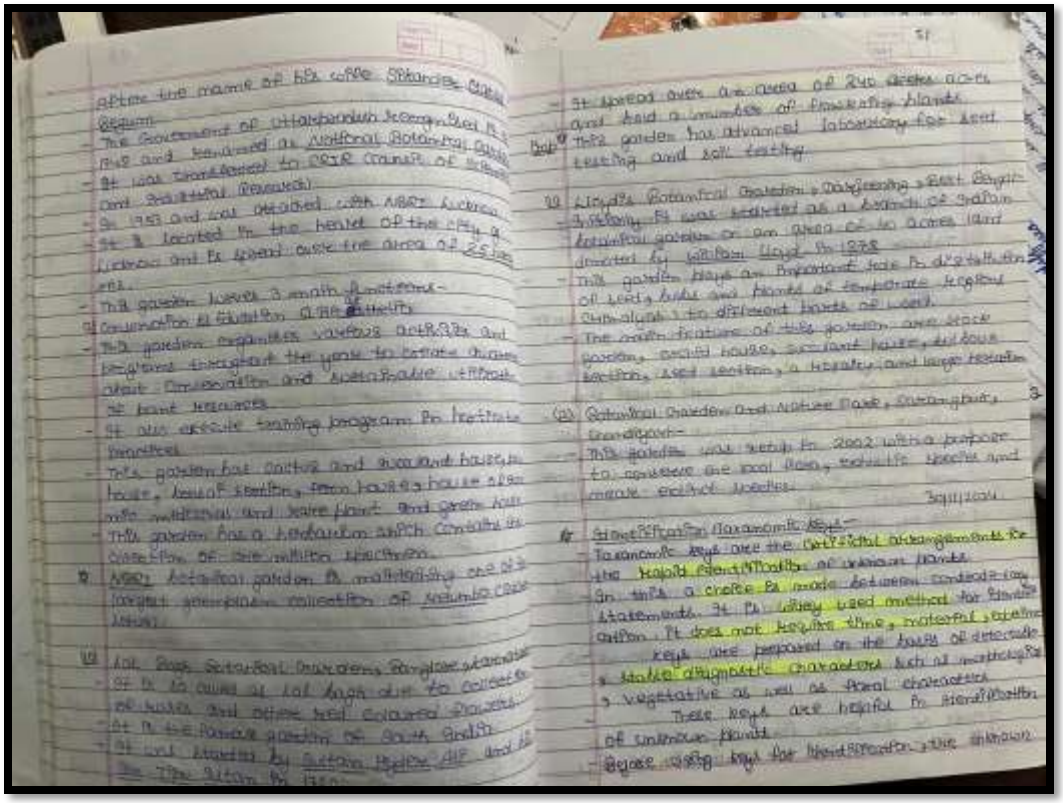
(Biotechnology)


Biotechnology

Definition

Classification


Uses of Arboretum


After the name of his wife Sikander Qiran Begum

The Government of Uttarakhand recognized it and declared as National Botanical Garden

It was transferred to State Council of Science and Technology (Research)

In 1963 and was declared with ABSI Lucknow

It is located in the heart of the city of Lucknow and it spread over the area of 25 Lac

The garden houses a museum

Conservation of Education of the students

The garden organizes various activities and programs throughout the year to create awareness about conservation and sustainable lifestyle

It has research

It also execute training programs for institute members

This garden has cactus and succulent house, house, house of section, fern house, house also with medicinal and rare plant and green house

This garden has a herbarium which consists of collection of the million specimens

ABSI Arboretum garden is maintaining one of its largest specimens collection of around 1000 species

Lal Bagh Botanical Gardens, Bangalore

It is known as Lal Bagh due to presence of lushes and other red coloured flowers

It is the famous garden of South India

It was created by Sultan Hyder Ali and his son Tipu Sultan in 1760

It spread over the area of 240 acres acres and had a number of flowering plants

This garden has advanced laboratory for seed testing and soil testing

Lloyd's Botanical Garden, Darjeeling, West Bengal, India

It was started as a branch of Calcutta Botanical garden on an area of 40 acres and developed by William Lloyd in 1878

This garden plays an important role in distribution of seeds, bulbs and plants of temperate regions of India and abroad

The main feature of this garden are rock garden, orchid house, succulent house, bulbous section, seed section, a library and large museum

(3) Botanical Garden and Arboretum Park, Chandigarh

This garden was setup in 2002 with a purpose to conserve the local flora, medicinal species and endemic species

Classification Taxonomic keys:-

Taxonomic keys are the critical determinants for the rapid identification of unknown plants.

In this a choice is made between contradictory statements. It is widely used method for identification. It does not require time, material, expertise

keys are prepared on the basis of internode

Habit: diagnostic characters such as morphological vegetative as well as floral characters

These keys are helpful in identification of unknown plants

Bogus using keys for identification of the unknown

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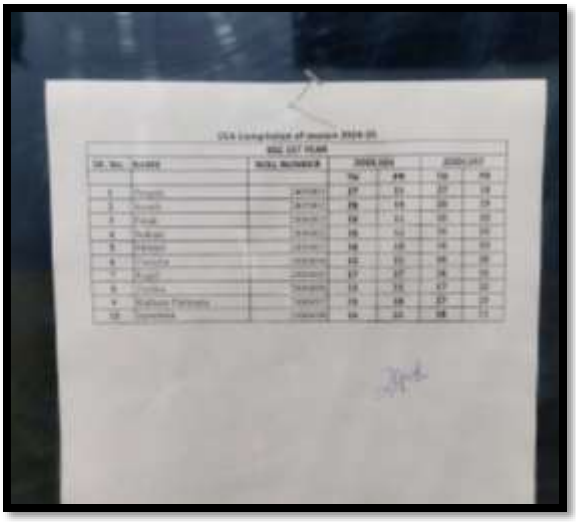
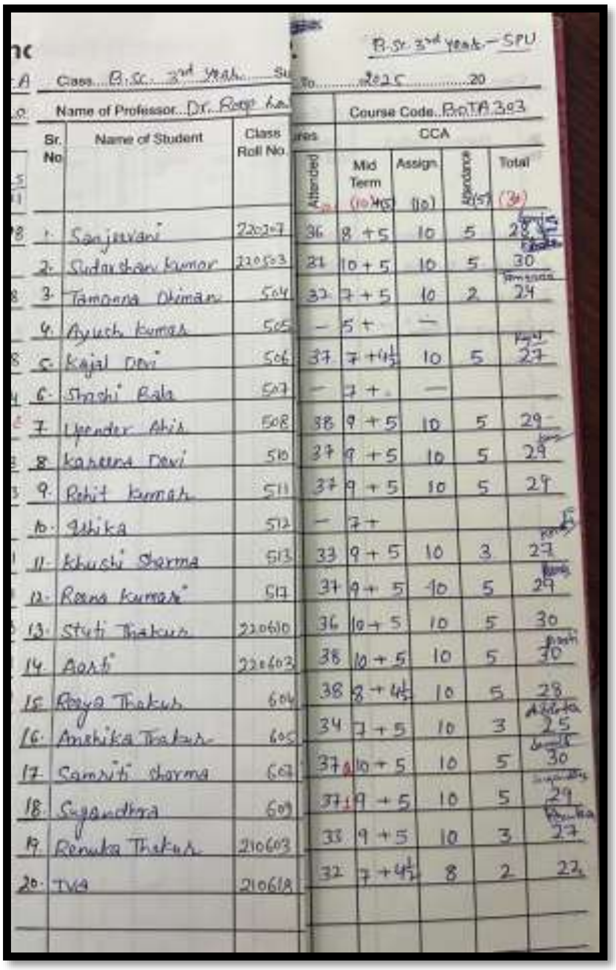
1.2.5 Prompt Communications of assessments/results





B.Sc. 3rd Year – SPU

Class B.Sc. 3rd Year 2025

Name of Professor Dr. Roop [illegible] Course Code BoTA 303

Sr. No	Name of Student	Class Roll No.	Attended	CCA Mid Term (10+5)	Assign. (10)	Attendance (5)	Total (30)
1.	Sanjeevani	220307	36	8 + 5	10	5	28
2.	Sudarshan Kumar	220503	21	10 + 5	10	5	30
3.	Tamanna Dhiman	504	32	7 + 5	10	2	24
4.	Ayush Kumar	505	–	5 +	–		
5.	Kajal Devi	506	37	7 + 4½	10	5	27
6.	Shashi Bala	507	–	7 +	–		
7.	Upender Ahir	508	38	9 + 5	10	5	29
8.	Kareena Devi	510	37	9 + 5	10	5	29
9.	Rohit Kumar	511	37	9 + 5	10	5	29
10.	Ishika	512	–	7 +			
11.	Khushi Sharma	513	33	9 + 5	10	3	27
12.	Reena Kumari	517	37	9 + 5	10	5	29
13.	Stuti Thakur	220610	36	10 + 5	10	5	30
14.	Aarti	220603	38	10 + 5	10	5	30
15.	Pooja Thakur	604	38	8 + 4½	10	5	28
16.	Ambika Thakur	605	34	7 + 5	10	3	25
17.	Samriti Sharma	607	37	10 + 5	10	5	30
18.	Sugandhra	609	37	9 + 5	10	5	29
19.	Renuka Thakur	210603	33	9 + 5	10	3	27
20.	IVA	210618	32	7 + 4½	8	2	22

		Department of Public Administration
Activity	**Type**	Dr. Reena Devi
Mode of teaching (Mention the mode of teaching. If you are following more than one mode, you may specify them)	**Lecture method only**	—
	Technology based teaching only	—
	Blended teaching	Yes (online and offline)
	Flipped classroom	—
	As per need of different groups of students	Yes
Curriculum Planning and Implementation	**Teaching Schedule followed or not**	Yes
	Learning Outcomes defined or not	Yes
	Curriculum enrichment practices (e.g. projects, surveys, tours, industrial visits). If yes, then specify	NA
	Internal assessment mechanisms (quizzez, class tests, presentation, assignments, MTT etc.) Followed or not. You may specify the mechanism	YES (class tests, presentation, assignments, MTT etc.)
	Prompt communication of assessment/results to the students (displayed on college website/notice board/class group/submitted to COE. If Yes, then specify time period, whether within 7 days, 8-14 days or More than 14 days	Yes within 7days

		Department of Chemistry	
Activity	**Type**	Mr. Aman Kumar	Mr. Jitender Thakur
Mode of teaching (Mention the mode of teaching. If you are following more than one mode, you may specify them)	**Lecture method only**		By chalk & Duster & White Board
	Technology based teaching only		By PPT and Interactive Board
	Blended teaching		Yes-
	Flipped classroom		Yes students asked to prepare topic
	As per need of different groups of students	Yes as per need of different groups of students	Yes doubt clearing session
Curriculum Planning and Implementation	**Teaching Schedule followed or not**	Yes followed	Followed as per Time table & Credit systems in Syllab
	Learning Outcomes defined or not	Yes	Yes
	Curriculum enrichment practices (e.g. projects, surveys, tours, industrial visits). If yes, then specify	Yes	class tests &
	Internal assessment mechanisms (quizzes, class tests, presentation, assignments, MTT etc.) Followed or not. You may specify the mechanism	Yes MTT and class test	Yes MTT & class tests
	Prompt communication of assessment/results to the students (displayed on college website/notice board/class group/submitted to COE. If Yes, then specify time period, whether within 7 days, 8-14 days or More than 14 days	Yes, 8-14 days	Yes, display of results of every test & assignments

		Department of Commerce	
Activity	**Type**	Mrs. Pallavi Berry	Mrs. Sushma Devi
Mode of teaching (Mention the mode of teaching. If you are following more than one mode, you may specify them)	**Lecture method only**	—	lecture method
	Technology based teaching only	—	—
	Blended teaching	Blended teaching	
	Flipped classroom	Flipped Classroom	flipped classroom
	As per need of different groups of students	As per need of diff groups of students	—
Curriculum Planning and Implementation	**Teaching Schedule followed or not**	Yes	Yes
	Learning Outcomes defined or not	Yes	Yes
	Curriculum enrichment practices (e.g. projects, surveys, tours, industrial visits). If yes, then specify	—	—
	Internal assessment mechanisms (quizzez, class tests, presentation, assignments, MTT etc.) Followed or not. You may specify the mechanism	Yes Class Test, Presentation, Assignments MTT	Yes Class Test Assignment Presented MTT.
	Prompt communication of assessment/results to the students (displayed on college website/notice board/class group/submitted to COE. If Yes, then specify time period, whether within 7 days, 8-14 days or More than 14 days	-Yes - Communicated through class groups within two days.	Yes. in the class soon within weeks.

Pallavi

Sushma