

# SRI KRISHNA DUTT ACADEMY

(Recognised by NCTE and Affiliated to University of Lucknow)

Programme Outcomes and Course Outcomes

# 2.6.1: Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the college are stated and displayed on website

#### **Programs Offered:**

The college offers programs in Science (Zoology, Botany, Chemistry group), Commerce, and B.Ed under the Education department.

It operates as a CoEd institution with a special focus on encouraging girls' education and women empowerment, particularly in regions of Uttar Pradesh with lower female literacy rates.

Admission is predominantly from nearby areas and associated villages, reflecting the college's community centric approach.

#### Significance of POs and COs:

Programme Outcomes (POs) represent the intended knowledge, skills, and attitudes that students will develop upon completion of their degree program.

Course Outcomes (COs) denote the specific knowledge and skills acquired by students at the end of individual courses.

#### Implementation:

#### **Orientation Program:**

An annual Orientation Program is organized by the Internal Quality Assurance Cell (IQAC) to familiarize new students with their chosen program and its outcomes.

#### **Assessment Methods:**

- 1. **Regular Attendance**: Students must attend at least 75% of classes to be eligible for final examinations, which is crucial for evaluating POs and Course Learning Outcomes (COs).
- 2. Feedback and Tests: Teachers provide regular feedback and conduct random tests to assess program COs.
- 3. Choice Based Credit System (CBCS): Introduced by the affiliating university, students choose co-curricular courses. Internal evaluation (25%) includes internal assessment (10 marks), Attendance (5 marks) and projects (10 marks), with 75% external evaluation through written examination.
- 4. **Vocational Courses:** In odd semesters of the B.Sc. and B.Com. programs, students have the opportunity to enroll in vocational courses. These courses are specifically designed to impart practical skills that are directly applicable to real world scenarios, with a focus on enhancing employability and fostering self-employment opportunities.

The vocational courses offered include:

B.Com. Semester II: Cyber Crime

B.Com. Semester IV: Entrepreneurship

B.Sc. Semester II: Food Chemistry

B.Sc. Semester IV: Hydroponics Cultivation of Plants

SRI KRISHNA DUTT ACADEMY SRI KRISHNA DUTT ACADEMY 2DIHS-1, Vridavan Yojana 2DIHS-1, Vridavan Lucknow Raibareily Road, Lucknow The objective of these courses is to provide students with hands-on experience and knowledge in specialized areas relevant to their field of study.

#### Internship Program:

In the final year of the B.Sc. and B.Com. programs, students are required to participate in a one-month internship program and it is 4 month in B.Ed. This internship provides them with the opportunity to gain real world experience by working in laboratories, commercial markets, or industries relevant to their respective fields of study.

At the conclusion of the internship, students are required to submit a compiled project report that reflects their experiences and learnings during the internship period. This report is evaluated based on criteria such as presentation skills, the quality of the project content, and the student's ability to articulate their learnings effectively.

#### **Quality Assurance Measures:**

An Internal Academic Committee, in collaboration with the IQAC, ensures alignment of courses with POs and COs.

The IQAC implements a structured feedback collection system to gather input on the curriculum from stakeholders, evaluating the achievement of Programme Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs).

This framework ensures students receive a well-rounded education and are equipped with the necessary skills and knowledge to excel in their chosen fields

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#### **Department of Commerce Lucknow University**

#### B.COM. SYLLABUS SEMESTER-WISE

#### PROGRAMME OBJECTIVE

The objective of the B.Com. programme at the University of Lucknow is to familiarise students with principles and concepts in the discipline of Commerce. The student will gain indepth knowledge of accounting, finance, business law, marketing, tax and costing. This program aims to provide students with specific knowledge and skills relevant to their career. The programme aims to make students aware of the new and emerging trends in the field of Commerce.

#### PROGRAMME OUTCOMES

This programme offers great career options and opportunities for students by providing them with relevant core and specific knowledge skills in the discipline of Commerce.

- 1. This programme would provide qualified graduates to the corporate sector, banking sector, insurance sector, financing service sector to meet their employment requirements.
- 2. Students can gain specialization in the field of Accounting, Costing, Finance and Taxation and acquire application oriented skills.
- 3. Students can independently Start-up their own Businesses as well as avail of self employment opportunities.
- 4. This programme imparts skills to students to sharpen their decisions making abilities both at personal & professional level.
- 5. Students will gain thorough knowledge in the field of finance and commerce and stand out in any organization. Students will develop an attitude for working efficiently and effectively in the business environment.

#### PROGRAMME SPECIFIC OUTCOMES

After completion of the course the students will acquire an indepth understanding of the core and new disciplines of the commercial world.

- 1. Students can become efficient managers in the field of Banking and Insurance.
- 2. Students can acquire practical skills and take up jobs as Accountants, Management Accountants, Audit Assistants and Executives in multinational companies.
- 3. After undergoing special training students may enrol to operate in the Stock markets.
- 4. Students can excel in different professional exams like C.A., C.S., CMA & MBA.
- 5. After clearing the requisite exam students can qualify for various Government jobs.
- 6. After undergoing a specialised course, students can become Tax and Financial Consultants.
- 7. Students can go for higher education and research in the field of finance and commerce.

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Raibareily Road, Lucknow

#### **FACULTY OF COMMERACE**

#### LCUKNOW UNIVERSITY

### B.COM. COURSE STRUCTURE (SEMESTER-WISE)

(Corrected)

#### I Year

	SEMESTER -I		SEMESTER -II		
1	Financial Accounting	1	Company Accounts		
2	Business Organisation	2	Business Laws		
3	Micro Economics-Concept, Consumption & Production	3	Micro Economics-Exchange and Distribution		
4	Currency, Banking and Exchange	4	Banking Operations		
5	Essential of Management	5	Human Behaviour at Work		
6	Business Communication	6	Concepts in Valuation		
	II	Yea	r		
SEMESTER -III			SEMESTER -IV		
1	Business Finance	1	Cost Accounting		
2	Principles and Practice of Marketing	2	Contemporary Audit		
3	Statistical Methods	3	Foreign Trade of India		
4	Public Finance	4	Export-Import Procedures and Documentation		
5 Selling and Advertising 5 Managing Human Resources					
6	Introduction of International Business	6	Information Systems and E-Commerce		
	111	l yea	ır		
_	SEMESTER -V		SEMESTER -VI		
1	Goods and Services Tax (GST)	1	ncome Tax Law and Accounts		
2	Labour Welfare Laws	2	Principles and Practice of Insurance		
3	Macro Economics	3	Applied and Business Statistics		
4	Indian Economy	4	Economics of Public Enterprises		
5	Institutional Framework for Business	5	Company Law and Secretarial Practice		
6	Business Operations	6	Fundamentals of Entrepreneurship & Projec		
6	·		Planning Comprehensive Viva-voce		

NOTE: (1) Each Semester will be six months duration.

(2) Each paper will carry 100 marks including Comprehensive viva-voce Total marks = 3700



#### Paper I: Financial Accounting

Course Objective:

The objective of this paper is to help students in acquiring conceptual knowledge of financial accounting. It aims to impart skills for recording & analyzing various kinds of business transactions and to familiarise students with the accounting procedure of different kinds of businesses.

Course Outcome: The student will be able to :-

- Acquire knowledge in the basic concepts and conventions of accounting.
- Prepare accounts of a partnership firm.
- Prepare accounts of special kinds such as Royalty accounts, Voyage accounts and Branch accounts.
- Prepare accounts as per norms in case of Hire Purchase & Instalment Purchase as well as Insolvency of the business units.
- Gain insight into the Indian & International accounting standards as well as IFRS.
- Develop skills in understanding and analysing the contents incorporated in books and accounts.

Unit I: Definition, Nature and Scope of Accounting, Concepts and Conventions, Introduction to Financial Statements, Capital and Revenue Items, Indian Accounting Standards & IFRS.

Unit II: Partnership Accounts - advanced problems and detailed study. Admission, Retirement and Death of partners, Dissolution of Partnership Firm.

Unit III: Hire Purchase and Instalment Accounts, Royalty Accounts, Insolvency Accounts.

Unit IV: Insurance Claim for loss of Stock and Loss of Profit, Branch Accounts, Voyage Accounts.

#### **Books Recommended:**

- 1. Kumar, Arvind & Saxena, Vishal Financial and Advanced Accounting
- 2. Shukla, S.M. Financial Accounting
- 3. Kumar, Audhesh Financial Accounting (वित्तीय लेखांकन)
- 4. Anthony, R.N. and Reece, J.S.: Accounting Principles
- 5. Gupta, R.L. and Radhawamy, M.: Financial Accounting
- 6. Shukla, M.C., Grewal, T.S. and Gupta, S.C. Advance Accounting
- 7. Compendium of Statement Sledners of Accounting- The Institute of Chartered Accountants of India, New Delhi
- 8. Mishra, A.K.: Financial Accounting
- 9. Gupta, S.P. Financial Accounting

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#### Paper -II: Business Organisation

#### **Course Objective:**

This course aims to make the students understand the organisational elements essential for a business entity. This course enables students to analyze and understand the environment of the organization and help the students to develop cognizance of the importance of organisation principles.

#### Course Outcome: The students will be able to:

- Understand basics about business organization and its various forms.
- Understand the Social Responsibility of Business towards the various groups of the society
- Get knowledge about computation and fixation of remuneration of labour and incentive plans.
- Gain insight about features of stock exchanges, commodity exchanges and their working as well as regulation.
- Gain knowledge of the new pattern of business operations and organisations i.e., E-business, LLP, OPC.
- Understand the various elements of organisation.
- Acquaint themselves with the global changes in the business arena.

Unit-I: Nature and scope of business, Social Responsibility of Business, Size of business units, Stock Market, Commodity Market, E-business, Business Environment.

Unit-II: Forms of business organizations and comparative study - Sole Proprietorship, Partnership, Joint stock company, co-operative organisation, One Man company.

**Unit –III:** Business combination and its types, Rationalisation and automation, Government and Business, Methods of Remunerating Labour.

**Unit-IV**: Organization process – Importance, Principles, Types of organization structure, Centralisation and Decentralisation, Committees, Departmentation, Delegation of authority.

#### **Books Recommended:**

- 1. Padmakar Asthana Business Organisation
- 2. Maheshwari, K.L., Maheshwari, R.K. & Ram Milan Business Organisation
- 3. Maheshwari, K.L., Maheshwari, R.K. & Madhu Bhatia Vyavsayik Sanghtan
- 4. Y.K. Bhushan Business Organisation
- 5. Companies Act, 2013.

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# B.Com. – Semester II Paper I: Company Accounts

#### **Course Objective:**

The objective of this paper is to help students acquire conceptual knowledge with respect to the Accounts of a company and to understand the provisions of the Company's Act 2013. It aims to provide knowledge of the accounting procedure adopted in different kinds of companies.

#### Course Outcome: The student will be able to :-

- Understand the features and accounting treatment of Shares and Debentures.
- Knowledge about Accounting entries related to Redemption of Shares and Debentures.
- Prepare of Company's Final Accounts.
- Acquire knowledge of accounting procedure adopted during Amalgamation and Absorption of companies.
- Acquire conceptual knowledge of Internal and external reconstruction of companies and their accounting treatment.
- Knowledge regarding accounting treatment and procedure adopted at the time of winding up of companies.

#### Unit I:

Meaning and kinds of shares. Issue, forfeiture and re-issue of forfeited shares. Redemption of Preference shares, Bonus shares. Meaning and kinds of Debentures – their issue and redemption.

#### Unit II:

Concept of amalgamation and absorption; AS 14 and Types of Amalgamation; Purchase Consideration; Accounting in the Books of Transferor of Company; Accounting in the Books of Transferee Company.

#### Unit III:

Concept of Reconstruction; Need of Reconstruction; Types of Reconstruction- Internal Reconstruction and External reconstruction; Alteration in Share capital; Reduction in share capital; Scheme of Accounting for Internal Reconstruction.

#### Unit IV:

Concept of Winding up of Companies; Preparation of Statement of Affairs and Deficiency Account; Preparation of Liquidator's Final Statement of Account.

#### **Books Recommended:**

- 1. Groves, R.E.V., Pendlebury, M. Company Accounts: Analysis, Interpretation and Understanding
- 2. Roth, Martin: Analysing Company Accounts
- 3. Bloomfield, Stephen: Understanding and Interpreting Company Accounts: A Practical guide
- 4. Gupta, R.L., Radhaswamy, M.: Sultan Chand & Sons, New Delhi
- 5. Maheshwari, S.N.: Corporate Accounting, Vikas Publishing House, New Delhi
- 6. Shukla, M.C., Grewal, T.S. and Gupta, S.C.: Advanced Accounts: S. Chand & Co., New Delhi
- 7. Moore, C.L. and Jaedicke, R: K.K. Managerial Accounting
- 8. Jha, B.K. and Shah, M.S.: Corporate Accounting.

#### Paper II: Business Laws

**Course Objective:** 

To objective of this course is to equip the students with the knowledge of various laws and regulations laid down by the Government for the operation of business.

Course Outcome: The students will be able to:-

- Understand the nature and meaning of contracts, forms of contracts and essentials of a valid contract.
- Gain insight into various kinds of contract.
- Gain indepth knowledge of Sales of Goods Act and Negotiable Instruments Act
- Understanding the rights, duties and responsibilities as a vendor and as a consumer.
- Have knowledge of the fundamentals of Consumer Protection Act.
- Keep updated about the amendments in these laws and regulations.

Unit -I: The Contract Act, 1872. Meaning, characteristics and kinds, essentials of valid contract: offer and acceptance, consideration, contractual capacity, free consent, legality of objects - void agreements.

**Unit –II:** Contract of Indemnity and Guarantee; Contract of Bailment and Pledge; Discharge of contract – modes, breach, remedies; quasi contract.

Unit –III: Contract of Agency, Sales of Goods Act, 1930 - Contract of Sale, meaning, difference between sale and agreement to sell, Conditions and warranties, Transfer of ownership in goods including sale by non agreement, Performance of contract of sale, Unpaid seller

Unit –IV: The Negotiable Instrument Act, 1881 – Definition, features, types of negotiable instruments, promissory note, bill of exchange, cheque, Endorsement and its types, Holder and Holder in due course.

Consumer Protection Act, 2019: Objectives and its salient provisions.

#### **Books and Acts recommended:**

- 1. Pullock and Mulla Indian Contract Act (Student's Edition)
- 2. Basnerjee, A.K. Indian Mercantile Law
- 3. Venkatesham, E-A Handbook of Mercantile Law
- 4. Pandia Mercantile Law
- 5. Indian Contract Act No. IX 1872
- 6. Indian Sale Goods Act 1930
- 7. Indian Partnership Act. 1932
- 8. Negotiable Instruments Act, 1881
- 9. Maheshwari K.L. and Ram Milan Business Law
- 10. Dr. G.K. Varshney Business Laws
- 11. D. Chandra Bose Business Laws
- 12. Consumer Protection Act, 1986

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#### Paper I: Business Finance

#### Course Objective:

The objective of the course is to familiarise students with the concept of finance, associated costs, capital structure and working capital management.

#### Course Outcome: The students will be able to:-

- Demonstrate an understanding of the overall role and importance of the finance function.
- Understand the role and responsibilities of a Finance Manager in an organisation.
- Gain knowledge of the concept of cost of capital, capitalisation; over and under capitalization.
- Have knowledge about the long and short term sources of finance as well as the Capital Market
- Apply ratio analysis as a tool of managing and controlling finances of a business entity.
- Analyse the complexities associated with working capital management, and the financing approaches to working capital.

#### Unit I:

Nature, Scope, Significance of Business Finance, Financial Goals, Finance Function, Duties, Responsibilities of a Finance Manager, Capital market: functions, types & significance.

#### Unit II:

Capitalisation: Concept, Over and Under-capitalisation: causes and remedies. Capital structure: Concept, Cost of Capital, Capital Budgeting.

#### Unit III:

Long term and short term, sources of capital – Owned and borrowed, Trade Credit, Bank credit, commercial papers etc., Analysis of Profitability, Activity, Liquidity, Solvency and Performance.

#### Unit IV:

Concept, Determinants and Sources of Working Capital, Fixed and Variable working capital, Estimation of working capital requirements, Financing Approaches to working capital.

#### Books recommended:

- 1. Kumar, A., Misra, P & Singh, D. Financial Management
- 2. Kulshreshtha, R.S. Financial Management (Hindi)
- 3. Srivastava, R.M. Financial Management
- 4. Pandey, I.M. Financial Management
- 5. Khan and Jain Financial Management
- 6. Rastogi Financial Management



#### Paper II: Principles and Practice of Marketing

#### **Course Objective:**

The objective of this course is to help students understand the basics of marketing and get them acquainted with consumer behaviour and various strategies that satisfy the consumer needs.

Course Outcome: The students will be able to:-

- Have knowledge about marketing and its functions
- Understand what is a product, its classifications and product life cycle
- Gain knowledge about the mechanism of price determination of a product in various markets
- Understand the need and significance of distribution channels
- Gain insight into the concept of advertising and how it affects the buying habits of a consumer
- Understand and trap the psyche of consumer in order to market a product.

Unit I: Introduction: Nature and scope of marketing: Importance of marketing, functions, Marketing concepts- traditional and modern; Selling Vs. Marketing; Marketing mix; Marketing environment, e-marketing.

**Unit-II**: Consumer Behaviour, Nature, scope and significance of consumer behaviour; Bases of Consumer Behaviour, Market segmentation- Concept and importance; basis for market segmentation, Promotion; Methods of promotion; promotion mix; Personal selling.

**Unit-III:** Product: Concept of product, consumer and industrial goods; Product planning and development; Product life cycle, Packaging – role and functions; Brand name and trade mark. Price: Importance of price in the marketing; Factors affecting price of a product, kinds and method of pricing.

Unit-IV: Distribution Channels – concept and roles; Types of distribution channels; factors affecting choice of a distribution channel; Retailer and wholesaler; physical distribution of goods; Transportation; warehousing; inventory control; order processing.

#### **Books Recommended:**

- 1. Maheshwari K.L., Maheshwari R.K. & Ram Milan Marketing Management
- 2. Prof. A. Chatterjee & Dr. R.K. Chaturvedi Marketing Fundamentals A Contemporary Insight
- 3. Agarwal, R.L. & Agarwal, D.P. Viparan Ke Sidhant Tatha Neetiyan
- 4. Gupta, A.P. Bharat Mein Viparan Ke Sidhant Thata Vyohar
- 5. Gupta, A.P. Marketing of Agricultural Produce in India
- 6. Varshney, R.L. & Gupta, S.P. International Marketing Managment
- 7. Kotler, Phillip Marketing Management Analysis Planning and Control
- 8. S.P. Bansal Marketing Management
- 9. R.S.N. Pillai & Bagarathi Modern Market
- 10. C.B. Gupta & Dr. N. Rajan Nair Marketing Management
- 11. Debray Dutta & Mahua Dutta Marketing Management
- 12. Dr. Ajit Kumar Shukla Marketing Management

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#### Paper I: Cost Accounting

#### **Course Objective:**

The objective is to acquaint the student with basic concepts used in cost accounting and various methods involved in cost ascertainment system. It aims at providing knowledge about the use of Costing data and cost sheet for planning, control and decision making in any organisation.

#### Course Outcomes: The students will be able to:-

- Understand the nature and scope of Cost Accounting.
- Gain knowledge about the advantages of cost accounting and classifications of various costs.
- Acquire knowledge about accounting and control of material cost and labour cost.
- Know overhead costing as well as and Apportionment and Absorption of Overheads.
- Understand the methods of costing, marginal costing and budgetary control system.
- Gain knowledge of Unit or Output costing as well as standard costing.

Unit –I: Definition, Nature, Scope, Significance and function of Cost Accounting, Cost Centre, Costs and its elements, System of ascertainment of cost, Control of Materials, Labour and Overhead, Allocation, Apportionment and Absorption of Overheads.

Unit -II: Output or Unit Costing, (Calcuation of Tender, quotation and estimated price), Contract and Job Costing, Process Cost Accounting.

Unit -III: Reconciliation of Cost and Financial Accounts, Service costing, Budgetary Control.

**Unit –IV**: Marginal Costing, Standard Costing.

#### **Books Recommended:**

- 1. M.L. Agarwal Cost Accounting (Hindi & English)
- 2. S.P. Gupta-Cost Accounting (Hindi & English)
- 3. Khan & Jain Cost Accounting
- 4. Audhesh Tripathi & Varshney Cost Accounting
- 5. Bigg Cost Accounts
- 6. Lunt Manual of Cost Account
- 7. Ridgeway Cost Account
- 8. Whelden Principles and Methods of Costing
- 9. Gupta, MP Costing
- 10. Lucey. T. Costing
- 11. Bharr Cost Accounting
- 12. Blocker & Weltmer Cost Accounting
- 13. Horngrance, Charles T. -Cost Accounting: A Managerial Emphasis



#### Paper II: Contemporary Audit

#### **Course Objective:**

This course aims at developing an understanding among students about the objective and concept of Audit. It enables students to gain knowledge of generally accepted auditing procedure and provisions regarding auditors appointment.

#### Course Outcomes: The students will be able to :-

- Understand the concept, types & techniques of audit.
- Gain Knowledge of audit documentation vouching and verification of Assets and Liabilities.
- Understand provisions regarding appointment of a company auditor and learn about his powers and duties
- Have knowledge of Special provisions regarding Government Audit.
- Gain insight into audit of special entities and emerging concepts in auditing as well as auditing and assurance standards.
- Understand the real life skills in the ascertainment of cost in various types of products and services.
- Unit –I: Nature & Objectives of Auditing; Types of Audit, Auditing Techniques; Internal Control & Internal Check, Audit Programme, Routine checking, Test checking.
- Unit –II: Audit Procedure, Vouching, Verification of Assets & Liabilities, Investigation, Divisible Profit and Dividend, Internal Audit.
- **Unit –III:** Government Audit, Audit of Limited Companies, Company Auditor: Appointment, Remuneration, Powers, Duties and Liabilities, Audit report.
- Unit -IV: Standards on Auditing, Audit of Special entities: Non Profit Organisations, Educational Institutions, Clubs, Cost Audit, Tax Audit and Management Audit.

#### **Books Recommended:**

- 1. Maheshwari K.L. and Maheshwari R.K. Contemporary Audit
- 2. Spicer and Peglar Practical Auditing
- 3. Batliboi Principles and Practice of Auditing
- 4. T.R. Sharma Contemporary Audit (Hindi & English)
- 5. Kamal Gupta Contemporary Auditing
- 6. Pankaj Garg Auditing and Assurance
- 7. B.N. Tandon A Handbook of Practical Auditing



#### Paper I: Goods And Services Tax

#### **Course Objective:**

This course aims is to familiarise the students with the GST law in the country and provide an insight into practical aspects of GST as well as to equip them to become tax practitioners. The course aims to provide knowledge of GST in a systematic manner so as to enhance analytical and problem solving skills for decision making.

#### Course Outcomes: The students will be able to:-

- Learn the concept of Indirect tax from Pre-GST period to Post-GST period.
- Understand the difference between forward charge, reverse charge mechanism and the difference between composite and mixed supply.
- Know the contents and format for various documents like tax invoice, bill of supply, debit note, credit note etc.
- Record and analyze the transactions for compliance under GST.
- Understand the procedure for registration, payment and refund of GST as well as mechanism to determine it.

**Unit-I:** Concept and types of Indirect Tax; Right to impose indirect tax by Centre (Union)/State and Union Territory Governments before and after 101<sup>st</sup> Amendment of the Constitution of India; Introduction of GST in India; Definition - Supply, Aggregate Turnover, Person, Business, Appropriate Government, Mixed Supply, Composite Supply, GSTN, GSTIN, E-Commerce Input Tax Credit etc. GST Models: Single GST & Dual GST; Types of GST:- CGST,SGST/UTGST,IGST; Levy and Collection of GST.

Unit -Ⅱ: Registration under GST: Persons liable to get registered, Compulsory Registration, Registration Procedure, Reverse Charge Mechanism, Composition Scheme and assessment under composition scheme; Zero rated supply; Exemption from GST, GST tax rate.

**Unit-III:** Input Tax Credit (ITC), Eligibility and conditions for taking Input Tax Credit, Apportionment of ITC and Blocked Credit; Various Documents under GST- Tax Invoice, Bill for Supply, Debit Note, Credit Note, Payment Voucher, Receipt Voucher, E-way bill, HSN Code and SAC Code.

Unit-IV: Assessment and Administration of GST - Types of GST Returns, Types of Assessment & Assessment Procedures, Role and Functions of GST Council, Tax Authorities and their powers; Tax deduction at Source & Tax Collection at Source, Refund of Tax.

#### Suggested Readings:

- 1. S.K. Shukla: GST in India (Hindi & English)
- 2. Bare Act
- 3. Taxman: Goods and Service Tax (Hindi & English)

#### Paper II: Labour Welfare Laws

#### **Course Objective:**

The objective of this paper is to familiarise students with the legislative provisions of the various labour welfare and social security schemes of India. It aims at imparting knowledge about how these can be utilised by the different classes of industries to enhance the productivity and efficiency of the workers/employees.

#### Course Outcome: The students will be able to:-

- Interpret the various provisions under the Act and understand how they can be used to improve industrial harmony.
- Understand policies related to compensation, insurance, provident funds, gratuity etc. for the benefit of the company and employees.
- Understand the role and complexities of trade unions in order to maintain cordial relations between management and labour.
- Gain knowledge of the provisions of various acts like Payment of Gratuity Act, Workmen's Compensation Act, Trade Union Act, Employees' Provident Funds, Miscellaneous Provisions Act and its application for labour welfare.

**Unit I:** Employees State Insurance Act, 1948 – Definition, Scope of the Act, Corporation, Standing committee, Medical Benefit council, Finance and Audit, Employees' State Insurance fund, Combination, Benefits, Adjudication of Disputes and Claims, Penalties.

Unit-II: Payment of Gratuity Act, 1952 – Scope and application, definition, continuous service, controlling authority, payment of gratuity, power to exempt, nomination, determination of the amount of gratuity, inspectors, recovery of gratuity, penalties.

Unit-III: Employees' Provident Funds and Miscellaneous Provisions Act, 1952 – Definition, scope of the act, Employees Provident fund, scheme and authorities. Determination of money due from Employers, Appellate Tribunal, Inspectors, offences and penalties.

**Unit-IV**: Workmen's Compensation Act, 1923 – Introduction, definitions, employer's liability for compensation, rules as to compensation, commission and procedure before them, offences and penalties.

Trade Union Act, 1926 – Definitions, scope of the act, Objectives and its provisions.

#### **Books Recommended:**

- 1. S.K. Shukla & K.P. Tewari Labour & Welfare Law (Hindi & English)
- 2. S.N. Mishra Industrial Law
- 3. V.K. Goswami Industrial Law
- 4. P.K. Jain Industrial Law
- 5. Badri Prasad Udyogik Sanniyam (Hindi)

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#### Paper I: Income Tax Law and Accounts

Course Objective:

This course aims is to make students aware about the provisions of Income Tax in India. It enables students to develop knowledge in identifying tax issues and applying the Income tax law to arrive at reasoned solutions to problems.

#### Course Outcomes: The students will be able to:-

- Know about the basic concept of Income Tax.
- Understand the provisions of Income tax in order to minimize the ultimate tax liability by setting of loss due to agricultural Income.
- Understand the provisions relating to residential status and incidence/charge of Tax.
- Compute total income under five Heads of Income i.e. Salaries, House Property, Profits & Gains from Business & Profession, Capital Gains and Other Sources.
- Acquire knowledge of the provisions and procedure for clubbing & aggregation of incomes and set-off & carry forward of losses.
- Understand provisions about appeal & revision, tax penalties, offence and prosecutions.

Unit-I: Basic Concepts: Income, agricultural income, casual income, assessment year, previous year, gross total income, total income, Person. Tax evasion, avoidance and tax planning. Basic of Charge; Scope of total income, residence and tax liability, income which does not form part of total income, deduction from Gross total income.

Unit-II: Head of the Income: Salaries; Income from house property; Profit and gains of business and profession. Capital gains; Income from other sources.

**Unit-III:** Deemed income: Aggregation of Income, Set-off and carry forward of losses; Tax Authorities; Assessment procedures.

Unit-IV: Computations of total income of an individual, H.UF

#### **Books Recommended:**

- 1. Shukla S.K. Income Tax: Laws and Accounts (Hindi & English)
- 2. Singhanai V.K. Students, Guide of Income Tax, Taxman, Delhi
- 3. Prasad, Bhagwati: Income Tax Law & Practice; Wiley Publication, New Delhi
- 4. Mehrotra, H.C. Income Tax Law & Accounts;
- 5. Dinker Pagare: Income Tax Law and Practice; Sultan Chand & Sons, New Delhi
- 6. Grish Ahuja & Ravi Gupta, Syustematic approach to income tax, Sahitya Bhawan publication, New Delhi.



#### Paper II: Principles and Practice of Insurance

#### **Course Objectives:**

This course aims at introducing students about the concepts and insurance practices in Life and General insurance. The objective is to familiarize students with the various products and schemes of life insurance and provisions as well as contracts in fire and marine insurances.

#### Course Outcome: The students will be able to:-

- Gain knowledge about the concept & purpose of insurance, Double insurance, Over insurance, Under-insurance and Re-insurance.
- Gain insight about the Theories, Principles and Contracts of Insurance.
- Learn various policies, Terms & conditions and Types of Life Insurance.
- Gain knowledge regarding basic principles of Fire Insurance contracts, fire policy, assignment and Claims.
- Acquire knowledge on Principles, Types, Conditions, Warranties in Marine Insurance policy as well as marine losses.
- **Unit –I:** Introduction, Purpose and Need of Insurance, Insurance as a social security tool; Insurance and economic development, Theories of Insurance, Principles of Insurance Contract, Risk, Double insurance, Over insurance, Under insurance, Re-insurance.
- **Unit –II:** Life Insurance Principles and Practice; Life insurance contracts; nature and characteristics, Types of life insurance policies, Terms & Conditions of the policy, Nomination and Assignment of policies, Computation of premium, Annuity payments, Mortality Table.
- **Unit –III:** Fire Insurance The basic principles of Fire Insurance contracts, Fire Policy; Conditions, Assignment, Claims.
- Unit -IV: Marine Insurance General Principles, Conditions and Warranties in marine insurance policy, Types of Marine insurance policies; Assignment of policy, Loss and abandonment, Marine losses.

#### **Books Recommended:**

- 1. Young Insurance
- 2. S.K. Shukla Insurance Law & Accounts (Hindi & English)
- 3. S.N. Mishra Insurance
- 4. Arif Khan Insurance
- 5. Huebner Life Insurance
- 6. Leigh A Guide of Life Insurance
- 7. Maclean Life Insurance
- 8. Godwin Principles and Practices of Fire Insurance
- 9. Bal Chand Bima Ke Prambhik Prakaran
- 10. Insurance Act 1938
- 11. M.N. Mishra Insurance

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#### Paper I: Income Tax Law and Accounts

#### **Course Objective:**

This course aims is to make students aware about the provisions of Income Tax in India. It enables students to develop knowledge in identifying tax issues and applying the Income tax law to arrive at reasoned solutions to problems.

Course Outcomes: The students will be able to:-

- Know about the basic concept of Income Tax.
- Understand the provisions of Income tax in order to minimize the ultimate tax liability by setting of loss due to agricultural Income.
- Understand the provisions relating to residential status and incidence/charge of Tax.
- Compute total income under five Heads of Income i.e. Salaries, House Property, Profits & Gains from Business & Profession, Capital Gains and Other Sources.
- Acquire knowledge of the provisions and procedure for clubbing & aggregation of incomes and set-off & carry forward of losses.
- Understand provisions about appeal & revision, tax penalties, offence and prosecutions.

**Unit-I:** Basic Concepts: Income, agricultural income, casual income, assessment year, previous year, gross total income, total income, Person. Tax evasion, avoidance and tax planning. Basic of Charge; Scope of total income, residence and tax liability, income which does not form part of total income, deduction from Gross total income.

Unit-II: Head of the Income: Salaries; Income from house property; Profit and gains of business and profession. Capital gains; Income from other sources.

**Unit-III:** Deemed income: Aggregation of Income, Set-off and carry forward of losses; Tax Authorities; Assessment procedures.

Unit-IV: Computations of total income of an individual, H.UF

#### **Books Recommended:**

- 1. Shukla S.K. Income Tax: Laws and Accounts (Hindi & English)
- 2. Singhanai V.K. Students, Guide of Income Tax, Taxman, Delhi
- 3. Prasad, Bhagwati: Income Tax Law & Practice; Wiley Publication, New Delhi
- 4. Mehrotra, H.C. Income Tax Law & Accounts;
- 5. Dinker Pagare: Income Tax Law and Practice; Sultan Chand & Sons, New Delhi
- 6. Grish Ahuja & Ravi Gupta, Syustematic approach to income tax, Sahitya Bhawan publication, New Delhi.

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#### Paper II: Principles and Practice of Insurance

#### **Course Objectives:**

This course aims at introducing students about the concepts and insurance practices in Life and General insurance. The objective is to familiarize students with the various products and schemes of life insurance and provisions as well as contracts in fire and marine insurances.

Course Outcome: The students will be able to:-

- Gain knowledge about the concept & purpose of insurance, Double insurance, Over insurance, Under-insurance and Re-insurance.
- Gain insight about the Theories, Principles and Contracts of Insurance.
- Learn various policies, Terms & conditions and Types of Life Insurance.
- Gain knowledge regarding basic principles of Fire Insurance contracts, fire policy, assignment and Claims.
- Acquire knowledge on Principles, Types, Conditions, Warranties in Marine Insurance policy as well as marine losses.

**Unit** –**I**: Introduction, Purpose and Need of Insurance, Insurance as a social security tool; Insurance and economic development, Theories of Insurance, Principles of Insurance Contract, Risk, Double insurance, Over insurance, Under insurance, Re-insurance.

**Unit** —**II**: Life Insurance — Principles and Practice; Life insurance contracts; nature and characteristics, Types of life insurance policies, Terms & Conditions of the policy, Nomination and Assignment of policies, Computation of premium, Annuity payments, Mortality Table.

**Unit –III:** Fire Insurance – The basic principles of Fire Insurance contracts, Fire Policy; Conditions, Assignment, Claims.

**Unit** —**IV**: Marine Insurance — General Principles, Conditions and Warranties in marine insurance policy, Types of Marine insurance policies; Assignment of policy, Loss and abandonment, Marine losses.

#### **Books Recommended:**

- 1. Young Insurance
- 2. S.K. Shukla Insurance Law & Accounts (Hindi & English)
- 3. S.N. Mishra Insurance
- 4. Arif Khan Insurance
- 5. Huebner Life Insurance
- 6. Leigh A Guide of Life Insurance
- 7. Maclean Life Insurance
- 8. Godwin Principles and Practices of Fire Insurance
- 9. Bal Chand Bima Ke Prambhik Prakaran
- 10. Insurance Act 1938
- 11. M.N. Mishra Insurance

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# DEPARTMENT OF BOTANY UG PROGRAMME B.Sc. BOTANY

#### PROGRAMME OUTCOMES (POs):

The three years (Six Semesters) UG Programme (B.Sc.) is designed to:

- PO 1: Ready students for higher studies on a wide base of inter-related subjects
- PO 2: Enable students to make informed choices regarding their future academic stream or endeavours
- PO 3: Arm students with the necessary experience to correlate theory with practical aspects

#### PROGRAMME SPECIFIC OUTCOMES (POs):

Upon completion of the UG programme, the student would be equipped with the following-

- PSO 1: Knowledge necessary for identification of plants and microorganisms
- PSO 2: Understanding of the importance of plants in human life
- PSO 3: Skills related to laboratory as well as field work
- **PSO 4:** Knowledge about the applications of plants in various industries
- **PSO 5:** Awareness about environmental conservation and sustainable use of plants
- **PSO 6:** Intellect to assess the socio-economic challenges related to plant sciences
- **PSO 7:** Aptitude to comprehend the role of microbes and higher organisms in biotechnology
- PSO 8: Necessary academic skills for a successful career in Botany and related spheres
- PSO 9: Aptitude and creativity required to become a successful entrepreneur in related enterprises

#### **COURSE STRUCTURE:**

Year	Semester	Paper	Paper Title	MM
I	I	I	Diversity of Plant Viruses, Bacteria, & Fungi	100
		II	Diversity of Algae, Lichens, and Bryophytes	100
	II III		Diversity of Pteridophytes, Gymnosperms & Elementary	100
			Palaeobotany	
		Practical	Based on Papers I, II and III	100
		- I	Netinginal Total	400

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II	III	IV	Angiosperms: Taxonomy, Morphology, and Embryology	100
		Practical	Based on Papers IV, V and VI	100
	IV	V	Cytology, Genetics	100
		VI	Plant Physiology	100
			Total	400
Ш	V	VII	Plant Biochemistry	100
		VIII	Plant Resource Utilization, Palynology and Biostatistics	100
		Practical	Based on Papers VII, VIII, IX, X and XI	100
	VI	IX	Ecology, Soil Science and Evolution	100
		X	Environmental Botany, Plant Pathology	100
		XI	Plant Molecular Biology, Biotechnology	100
			Total	600
			GRAND TOTAL	1400

# B.Sc. BOTANY SEMESTER I PAPER I: DIVERSITY OF PLANT VIRUSES, BACTERIA, & FUNGI [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The course content of this paper aims to apprise the students of the differences between prokaryotes and eukaryotes. The students will be taught about the criteria and methods of classifying viruses, bacteria and fungi, along with their diversity and their importance. They will get an overview of the importance of microbes in nature and in our lives.

#### **COURSE OUTCOMES (COs):**

- CO 1: The study of viruses, bacteria and fungi will enable the students to compare and understand the key concepts of the diverse microbial world.
- CO 2: Students will learn how viruses and sub-viral pathogens serve as important model systems in the study of the various phenomena common to life, in addition to the techniques and tools related to the study of plant viruses.
- CO 3: Students will understand the role played by bacteria in the colonization of land by higher forms, and comprehend their relevance in the fields of molecular biology and biotechnology, environmental and industrial microbiology.

CO 4: Students will understand pathogenicity of fungi and host responses, and the importance of fungi as saprobes.

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#### **B.Sc. BOTANY SEMESTER I**

PAPER II: DIVERSITY OF ALGAE, LICHENS, AND BRYOPHYTES [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The content of this paper has been designed to allow students to comprehend the diversity of Cryptogams – Algae, Lichens and Bryophytes. Type study should enable students to understand the morphological and reproductive variations within each major group and individually. They will also learn to appreciate the ethno-botanical aspect and the economic importance of these groups.

#### **COURSE OUTCOMES (COs):**

- **CO 1:** Recognize the Algal diversity, morphological and reproductive features of various genera, and classification of algae and lichens
- CO 2: Understand the economic importance of algae and significance of lichens in relation to pollution.
- CO 3: Knowledge of features, classification and affinities of Bryophytes, and diversity in gametophytic and sporophytic organization of Moss and Hornwort
- **CO 4:** Recognize the diversity in the gametophytic and sporophytic organization of Liverworts.

### B.Sc. BOTANY SEMESTER II

PAPER III: DIVERSITY OF PTERIDOPHYTES, GYMNOSPERMS, AND ELEMENTARY PALAEOBOTANY [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The contents of the syllabus of this paper target at making the students aware of the existing diversity and economic significance of Pteridophytes and Gymnosperms. It aims at educating the students about morphological, anatomical and reproductive features based on type forms. Besides, evolution of stele in Pteridophytes and basic aspects of Palaeobotany have been included to prepare the students for higher studies.

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge of different classes of Pteridophytes along with their stelar details and seed habit
- CO 2: Complete insight of the morphological, anatomical and reproductive diversity within the Pteridophytes
- CO 3: Knowledge of morphological, anatomical and reproductive diversity within Gymnosperms

SRI KRIV-IV DUTT «ADEM) 2D/HS-1 Vindavan Yojna RaibareNy Wad, Lucknow CO 4: Understanding of the economic importance of Gymnosperms and basic knowledge of fossils

# B.Sc. BOTANY SEMESTER III PAPER IV: ANGIOSPERMS: TAXONOMY, MORPHOLOGY AND EMBRYOLOGY [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The framing of the syllabus has been done to apprise the students of the large taxonomical and reproductive diversity amongst seed plants. They would also be made aware of the different classifications, assisted by systematic study of representative families. It is also aimed to impart knowledge about meristems, growth, differentiation and development along with the reproductive behavior.

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge of Angiosperm systematics through classifications, herbaria, botanical gardens and hotspots
- CO 2: Complete insight of the taxonomic & phylogenetic diversity and economic importance of representative families
- CO 3: Clear concept of meristems, tissues, their growth and differentiation, and development of organs
- CO 4: Understanding of the reproductive system in Angiosperms

# B.Sc. BOTANY SEMESTER IV PAPER V: CYTOLOGY, GENETICS [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

Course content of this paper has been formulated to introduce the concept of cell, cell organelles and chromosomes to the students. They will be educated about the hereditary nature of the chromosomes and patterns of inheritance followed for different characters. It is also aimed to make the students aware of the possible changes in existing germplasm through aberrations, ploidy changes and mutation.

#### **COURSE OUTCOMES (COs):**

CO 1: Knowledge of structure and function of cell and its organelles

CO 2: Understanding of the chromosome organization and cell division

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- CO 3: Understanding of the phenomenon of inheritance along with deviations and sex determination
- CO 4: Knowledge of type, occurrence and mechanism of genomic alterations and their evolutionary significance

## B.Sc. BOTANY SEMESTER IV PAPER VI: PLANT PHYSIOLOGY [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The content of the syllabus for this paper targets at making the students aware of the various physiological processes taking place in the plants. They will be taught phenomenon of ascent of sap, transpiration, mineral nutrient uptake and requirement, photosynthesis, respiration, nitrogen metabolism, growth and movement in a simple and systematic manner so that they can comprehend the complex topics. Besides, it is aimed to communicate the roles of enzymes and phytohormones to the students.

#### **COURSE OUTCOMES (COs):**

- **CO 1:** Knowledge of different aspects of plant water relations, culture methods and mineral nutrients.
- **CO 2:** Complete insight of plant enzymes and various perspectives of photosynthesis.
- CO 3: Knowledge of major macromolecules, respiratory pathways and fatty acid metabolism.
- CO 4: Understanding of general aspects of nitrogen metabolism, growth, phytohormones and movement in plants.

## B.Sc. BOTANY SEMESTER V PAPER VII: PLANT BIOCHEMISTRY [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The contents of the syllabus for this paper have been designed with the objective of introducing the principles and fundamentals of plant biochemistry. It aims at apprising the students about the diversity of bio-molecules, their structure, properties and biological roles with plants.

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge of carbohydrates and the diversity of polysaccharides
- CO 2: A clear understanding of fatty acids and lipids with respect to their structuré and properties.

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- CO 3: Classification and organization of proteins and their biological roles
- CO 4: An insight into the catalytic function of enzymes

# B.Sc. BOTANY SEMESTER V PAPER VIII: PLANT RESOURCE UTILIZATION, PALYNOLOGY AND BIOSTATISTICS [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The contents of this paper aim at making the students aware of the large amount of plant resources that are used by them on a daily basis. It is aimed at imparting knowledge about the centres of crop origin and diversity, breeding practices, conservation methods and the uses of various crop plants. The other major objective is to introduce palynology and various biostatistical methods.

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge of centres of crop diversity and origin, domestication and uses of crop plants
- CO 2: Complete insight into economically important plants
- CO 3: Understanding of methods of conservation of plant resources
- CO 4: Basic knowledge of pollen structure and utility of biostatistical methods

#### B.Sc. BOTANY SEMESTER VI PAPER IX: ECOLOGY, SOIL SCIENCE AND EVOLUTION [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The syllabus is designed to help students to gain an understanding of ecological diversity, plant succession and ecosystem. Additionally it has been designed to introduce the fundamentals of soil science, and theories of evolution

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge about the ecological groups of plants and their adaptations to diverse habitats
- CO 2: Gain an insight into the diverse ecosystems and related food webs and ecological pyramids
- CO 3: Information on soil types and their properties, and an understanding about problem soils
- CO 4: Understand the concept of origin of life, and comprehend evolution based on theories and evidences

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#### B.Sc. BOTANY SEMESTER VI PAPER X: ENVIRONMENTAL BOTANY AND PLANT PATHOLOGY [MM 100 (80+20)]

#### **COURSE OBJECTIVES:**

The syllabus of this paper aims to make students aware of the available mineral resources, soil types, water and energy resources and forest wealth. They will also be apprised of the existing problem of pollution and management along with information about geographical distribution of plants, biotic communities, population dynamics and natural vegetation of India. The students will also be taught the etiology of various viral, bacterial and fungal diseases and the concept of integrated disease and pest management.

#### **COURSE OUTCOMES (COs):**

- CO 1: Knowledge of different aspects of mineral resources, soil types, water and energy resources and forest wealth
- CO 2: Complete insight of different types of pollution and their management
- CO 3: Knowledge of geographical distribution of plants, biotic communities, population dynamics and natural vegetation of India
- CO 4: Information and practical knowledge of etiology of viral, bacterial, fungal and insect-pest diseases and IPM

#### B.Sc. BOTANY SEMESTER VI PAPER – XI: PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

#### **COURSE OBJECTIVES:**

The course content of this Paper aims at introducing biochemical and molecular events taking place within cells to the students. They will be made aware of the structure, function and replication of nucleic acids, structure and properties of polysaccharides, proteins, vitamins and enzymes. Knowledge about genetic code, expression of genes and also regulation will be imparted to the students. They will also be apprised with various aspects of biotechnology, with emphasis on recombinant DNA technology, transgenics and plant tissue culture.

#### **COURSE OUTCOMES (COs):**

- CO 1: Understand the biochemical nature of nucleic acids, their replication, and role in living systems
- CO 2: Complete insight into the structure and function of carbohydrates, proteins, vitamins, enzymes and energy rich compounds
- CO 3: Knowledge of genetic code, gene expression and regulation

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CO 4: Understand the general aspects of biotechnology, recombinant DNA technology and tissue culture

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#### Department of Chemistry

#### **Lucknow University**

#### Lucknow

#### **B.Sc Chemistry**

#### **University of Lucknow**

#### Program outcome

- **PO-1-** The program well demonstrate an acute understanding of the major thematic concepts underlying the discipline of chemistry, both individually as well as in group, via written assignment and viva.
- **PO-2** It will develop in the student scientific understanding of the subject, that he is able to design, conduct, record and analyse the result of chemistry experiments.
- **PO-3** It will prepare students for the upcoming employment challenges including pursuing higher records with an emphasis on encouraging entrepreneurial instinct.
- **PO-4** It would generate new scientific insight and their application towards enhancement of innovation in the national economy.
- **PO-5-** It would encourage publication of innovative research in the leading publications across the word.
- **PO-6-** The student will develop scientific temper and innovative analytical mindset that sets them apart from students in other comparable programmes across India.

#### **Programme Specific Outcome**

**PSO-1** The chemistry of elements, coordination complexes, structure and properties of some well known compounds

- **PSO-2** Principles of organic chemistry which in turn forms the basis of organic syntheses, retrosynthetic pathways for structural elucidation. Pro-chiral and chiral syntheses protocols in brief.
- **PSO-3** Physical aspects of chemical sciences which when amalgamated with the understanding of inorganic and organic chemistry benefits the design, fabrication measurements and applications of the newly synthesized compounds meant for electrochemical, medicinal, optoelectronic and materials applications
- **PSO-4** Introduction of the  $\alpha,\beta$ -unsturated carbonyl compound, and mechanism of various named condensation reactions of carbonyl compounds and their use in food and pharmaceuticals.
- PSO-5 Basic practical aspects of inorganic, organic and physical chemistry
- **PSO-6** Basic organometallic, bioorganic and bioinorganic chemistry

#### B.Sc Chemistry semester I Paper I Inorganic Chemistry MM: 100 (80+20)

#### Course outcome

- Students admitted in B.Sc. Chemistry semester program will gain precise insight into the
- **CO-1** structure of atoms and associated important rules, importance of chemistry of elements.
- CO-2 lonic, covalent and non-covalent bonding which always play pivotal role in deciding the chemistry and properties of any compound/material.
- CO-3 Periodic properties of elements and several parameters associated with elements
- CO-4 Solid state chemistry which forms the basis of the development of targeted crystalline solids inculcating varied defects which induces variety of materials properties viz. piezoelectricity.
- **CO-5** Chemistry of elements belonging to s-block, noble gases and main group.

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#### B.Sc Chemistry semester I Paper 2 Organic Chemistry MM: 100 (80+20)

#### Course outcome

- Upon successful completion of this course, the student will be able to
- CO-1 Understand different organic compounds with respect to the functional group and thus capable to name the organic compounds as per IUPAC nomenclature.
- **CO-2** Understand the basics of chemical reactions i.e.Substrate and Reagent, types of Reagents, Electrophilic and Nucleophilic Homolytic and heterolytic fission. Electron mobility, Inductive effect etc.
- **CO-3** Recognize and draw constitutional isomers, stereoisomers, including enantiomers and diasteromers, racemic mixture and meso compounds.
- **CO-4**. Understand fundamental principles of organic chemistry and predict outcomes and derive mechanism of various types of organic reactions.
- CO-5 Understand various types of reactive intermediates and factors affecting their stability
- **CO-6** Understand the nomenclature, synthesis, isomerism and physical properties of alkanes and cycloalkanes.
- **CO-7** Understand the concept of Aromaticity of benzenoids & non-benzenoids, the preparation, reactivity & structure of aromatic compounds.
- **CO-8** Learn the preprations, reactivity & stereochemistry of SN1 &SN2 reactions of Halogen compounds.

B.Sc Chemistry semester II Paper 3 Physical Chemistry MM: 100 (80+20)

#### Course outcome

- **CO-1-** Students would gain knowledge regarding the basic of computers and mathematical concepts of log, permutation and combination, differential and integration of some relevant functions.
- **CO-2-** Student would gain understanding of gaseous state, critical phenomenon, liquid state, solid state, colloidal state and liquid crystals.
- **CO-3-** It would help students recognize the importance of chemical kinetics and catalysis.

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#### B.Sc Chemistry semester HI Paper 4 Physical Chemistry MM: 100 (80+20)

#### Course outcome

- **CO-1** After the completion of the semester, student will acquire knowledge of first law and second law of thermodynamics, thermochemistry, entropy enthalpy etc.
- CO-2- It will also make them familiar with conductance, equivalent conductance, Kohlrausch's law, Ostwald dilution law, Deby-Huckel Onsagar equation, e.m.f. of cell, types of cell, liquid junction potential, p<sup>H</sup> and p<sup>ka</sup>, Henderson-Hazel equation etc.

#### B.Sc Chemistry semester IV Paper 5 Inorganic Chemistry MM: 100 (80+20)

#### Course outcome

- **CO-1** Chemistry of transition and inner-transition elements. These insights are important as they help in the rational selection of the cations of these elements for tailor-made syntheses of newer complexes
- CO-2 Concepts of coordination chemistry and their applications
- CO-3 Importance of different acid-base concepts which forms the basis of rational ligand designing and coordination complex formation for specific bioinorganic, materials and optoelectronic applications.
- **CO-4** Importance and different chemical aspects of non-aqueous solvents which now-a-days are gaining importance in varied targeted syntheses of drugs and materials for technological applications

B.Sc Chemistry semester IV Paper 6 Organic Chemistry MM: 100 (80+20)

#### Course outcome

The completion of this course enables the student to understand the subject initially

**CO-1** The preparation and chemical reactions of Alcohols and Epoxides -Alcohols Dihydric alcohols: (Ethylene Glycol) Trihydricalcohols: (Glycerol)

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- **CO-2** Understanding the order of reactivity of different carboxylic acid derivatives and the reactivity of different carboxylic acid derivatives.
- **CO-3** Able to recognize structures of acid halides, esters, amides, acid anhydrides.
- **CO-4** Able to write down structure of phenol and phenoxide ion and chemical reactions of phenols.
- **CO-5** Know the mechanism of named reactions of carbonyl compounds and condensation reactions as well as their use in food and pharmaceuticals.

#### B.Sc Chemistry semester V Paper 7 Organic Chemistry MM: 100 (80+20)

#### Course outcome

Students on completion of the course will develop a comprehensive knowledge of

- CO-1 The organometallic compounds such as Grignard reagent which have been widely used on both laboratory and commercial scale and is one of the most common organometallic reagents used for the formation of carbon–carbon bonds. Organosulphur compounds which have therapeutic use and pharmacology
- **CO-3** Carbohydrate ,its classification and use in the food industry etc.
- CO-4 Protein, aminoacid and peptides. Chemical structure of RNA and DNA.
- **CO-5** Determination of saponification value ,acid value and iodine value of oil. Synthetic detergent.
- **CO-6** Various polymers, their method of polymerization and their use in industry

B.Sc Chemistry semester V Paper 8 Physical Chemistry MM: 100 (80+20)

Course outcome

SPIKACH WUTT ACADEMY 20/H3 Wallam Yojna Raibarem Boad Lucknow **CO-1**- After the completion of the semester student will acquire knowledge of introductory quantum mechanics, dipole moment and photochemistry. He will also be get familiar with dilute solutions, colligative properties and experimental methods of determining various colligative properties. He will learn the third law of thermodynamics, distribution law, phase rule and their derivation.

#### B.Sc Chemistry semester VI Paper 9 Inorganic Chemistry MM: 100 (80+20)

#### Course outcome

After the completion of the semester student will acquire knowledge

- CO-1 Semi-modern concepts of metal ligand bonding in coordination complexes
- **CO-2** Theories of electronic absorption and magnetic properties of coordination complexes The fine tuning these two very important parameter lead to the design and fabrication of compound, metal-organic frameworks, coordination polymers for optoelectronic and single-molecular magnets (SMM).

B.Sc Chemistry semester VI Paper 10 Inorganic Chemistry MM: 100 (80+20)

#### Course outcome

- CO-1 Inorganic polymers viz. silicones which find applications in materials pharmaceutical industries and surgery too. Phosphazenes which in last couple of years had witnessed significant development as emerging smart materials.
- CO-2 Class-a and class-b donor-acceptors, symbiotic relationship
- **CO-3** Organometallic and bioinorganic concepts which in any of the previous semesters have not been accounted.

B.Sc Chemistry semester VI
Paper 11 Organic & Physical Chemistry
MM: 100 (80+20)

Course outcome

This course provides students with a detailed knowledge of the fundamental aspects of the subject spectroscopy such as

- **CO-1** Infrared spectroscopy in which characteristic absorptions of various functional groups.
- **CO-2** Ultraviolet absorption spectroscopy ,Beer Lambert Law, types of electronic transitions and the effect of conjugation and concept of chromophore and auxochrome.
- **CO-3** Nuclear magnetic resonance, interpretation of nmr spectra of simple organic molecule.
- **CO-4** Quantum mechanics as well as of spectroscopy. They will have comprehensive understanding of valence bond model and molecular orbital model.

Principal RI KRISHVALV TACADEMY 2D/HS-1 Vri Sayan Yejna Raibareilly Kaya, Lucknow

#### B. Sc. in Zoology

Students of undergraduate degree Programmes of Zoology at the time of graduation will be able to:

#### **Program Objectives:**

Zoology as one of the subjects at undergraduate level, should be studied in an integrated and crossdisciplinary manner with a comprehensive understanding of all living systems and their relationship with the ecosystem. Within the broad-range skill sets related to the discipline, it is required to impart and assess the quality of critical thinking, analytical and scientific reasoning, and problem-solving capacity.

Our undergraduate program in Zoology is designed to prepare students to have:

**PO1.Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

**PO2.Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

**PO3. Social Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.

**PO4.** Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

**PO5.** Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

**PO6.** Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

**Program Specific Outcomes:** 

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**PSO1** Help students to understand life-environment interaction.

**PSO2** Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment

**PSO3** Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.

PSO4 Help students to understand the complex evolutionary processes and behaviour of animals

PSO5 Correlates the physiological processes of animals and relationship of organ systems

**PSO6** Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species

**PSO7** Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, lac culture etc.

PSO8 Understand various concepts of genetics and its importance in human health

PSO9 Apply the knowledge and understanding of Zoology to one's own life and work

**PSO10** Develops empathy and love towards the animals

**PSO11** To perform laboratory procedures

**Course Outcomes:** 

Animal Diversity - Lower Non-Chordata

CO1 Describe general taxonomic rules on animal classification

CO2 Understand the diversity and classification of lower non-chordates (invertebrates)

CO3 To study the habits, morphology, physiology, reproduction and development some type animals from protozoa to nemathelminthes.

Higher Non-Chordata from Annelida to Echinodermata

CO1 Describe general taxonomic rules on animal classification

CO2 Understand the diversity and classification of higher non-chordates (invertebrates)

2D/HS- Mazyan Yojna Ralbarelli, Ryad, Lucknow CO3 To study the habits, morphology, physiology, reproduction and development some type animals from annelida to echinodermata

#### Cell Biology and Genetics

CO1 Structural and functional aspects of basic unit of life and cell organelles i.e. cell concepts

CO2 Mendelian and non mendelian inheritance

CO3 Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism

#### Chordata

CO1 Describe general taxonomic rules on animal classification

CO2 Understand the diversity and classification of chordates

CO3 To study the habits, morphology, physiology, reproduction and development some type animals

CO4 To study comparative anatomy of various vertebrate systems

#### **Animal Physiology and Biochemistry**

CO1 Seeks to understand the mechanisms that work to keep the organism alive and functioning

CO2 Physiological and biochemical understanding into the nature of mechanical, physical, and biochemical functions of organs and the cells of which they are composed

CO3 Interactions and interdependence of physiological and biochemical processes

CO4 To understand the basic biochemical building blocks and their metabolism

#### **Evolution and Developmental Biology**

CO1 Theories of Evolution

CO2 Evolution of species and their evolutionary processes

CO3 Basic concepts of developmental biology

CO4 Development of non mammalian and mammalian vertebrates

Animal Behaviour, Chronobiology, Endocrinology and Neurobiology

RIKKISHN, DOFT ACADEMY 2D/HS 1 Stades an Yojna Raibale V Boad, Lucknow CO1 To understand Animal behaviour and response of animals to different instincts

CO2 To understand how the rhythmic geophysical environment impacts the internal rhythms,

CO3 To understand environmental cues are perceived by the organisms and modulate the circadian physiology at molecular, cellular and systems levels

CO4 To understand the basics of endocrinology and endocrine regulation of different body functions

CO5 To understand the nervous system and its functioning

#### **Economic Zoology**

CO1 To gain knowledge of Agro based Small Scale industries

CO2 To understand the life history of parasites of domestic animals

CO3 To understand the life history of vectors and pests

CO4 To study the culture of various organisms for economic benefit

#### Molecular biology and Immunology

CO1 To study the structure and organization of DNA

CO2 Conversion of genetic information into proteins

CO3 Imparts in depth knowledge of tissues, cells and molecules involved in host defense mechanisms

CO4 Understanding the types of immunity

CO5 Interactions of antigens, antibodies, complements and other immune components

CO6 Understanding of immune mechanisms in disease control, vaccination, process of immune interactions

#### Bioinstrumentation, biotechnology, bioinformatics and biostatistics

**CO1** To study the principles and uses of basic scientific instruments

CO2 To understand the basic concepts of genetic engineering and its applications in various industries

CO3 To understand the application of information technology in biological sciences

SRI KRIDANADON ACADEMY 2D/HSV Windavan Yojna Raibarelly Road, Lucknow CO4 To understand the application of statistical tools on the organisms

Environmental biology, Wildlife and Toxicology

CO1To understand the ecosystem structure, functions, processes and adaptation

CO2 To understand distribution of animals in various zoogeographical realms

CO3 To understand the concept of wildlife and their conservation

CO4 To understand environmental pollution, pollutants and their control measures

CO5 To understand the xenobiotics and their effects on organisms

D/HS-Windayan y aibarei

#### University of Lucknow

## Sri Krishna Dutt Academy Degree College, Lucknow

#### **B.Ed. Programme**

### PROGRAMME OUTCOMES FOR B.ED. (2-YEARS)

On successful completion of the two-year B.Ed. programme, pupil teachers will be able to develop-

- 1. Teaching competency: Know, select and use of learner-centered teaching methods, understanding of paradigm shift in conceptualizing disciplinary knowledge in school curriculum, necessary competencies for organizing learning experiences, select and use of appropriate assessment strategies for facilitating learning.
- 2. Pedagogical skills: Applying teaching skills and dealing with classroom problems.
- 3. Teaching through Non-conventional Modes: Evolving a system of education which enhances the potential of every learner to acquire, retain and transform knowledge leading to wisdom society through creative, experiential and joyful modes of learning.
- 4. Critical Thinking: Analysis of Curriculum, construction of blue print, selecting appropriate teaching strategies according to needs of students and conducting action research to solve classroom problems.
- 5. Effective Communication: Presenting seminar before peer students and teachers and practicing communication skills through various linguistic activities and applying it for better classroom communication.
- 6. Sensitivity towards Inclusion: Identifying the diversities and dealing it in inclusive classrooms environment, guidance and counseling programmes for disabled students.
- Effective Citizen Ethics: Understand different values, morality, social service and accept responsibility for the society.

8. Self-directed Learning: Preparing scripts for servinars, lesson plans and online content. SRI KRI

> 2D/HS Raibarel

INA DUTT ACADEMY

- 9. Social Resilience: Understand about social entities and enable to cope up with adverse conditions of life.
- 10. Physical Development: Practice yoga, physical education and games and sports.

SRI KRISH A DAN ACADEMY 2D/HS-1 Vola 35 Yojna Raibareilly Tod, Lucknow 11. Team Work: Enable to work as a member or leader in diverse teams and in multidisciplinary settings by following the principles of collaborative learning, cooperative learning and team teaching.

# PROGRAMME SPECIFIC OUTCOMES FOR B.ED. (2-YEARS)

- 1. Enable to understand learner and his learning environment, contemporary India and education, school management, gender, school and society.
- 2. Enable to comprehend Language across the curriculum, Reading and reflecting on Texts, Drama and Art in Education, developing Communication Skills and observation of school activities by school internship.
- 3. Understand the individual differences among students, measuring the attainment, evaluating progress, and assessing learning abilities, guidance and counseling programmes, educational technology, ICT and lesson planning.
- 4. Practice teaching in Schools, inculcate the real experiences of classroom teaching and online teaching by using ICT and its different tools and software.
- 5. Understand the classroom diversities and enable them to deal with diverse learners in inclusive classroom setup, environmental education, Field Engagements with community and Community Participation (NSS, Community Services etc.).

## **COURSE OUTCOMES FOR B.ED. (2-YEARS)**

#### Semester-I

Course code	Title	Course Outcomes
Paper I:	Philosophical and Sociological Perspective of Education	<ul> <li>To enable the pupil teachers:</li> <li>To understand the philosophical and sociological perspective of education.</li> <li>To understand the meaning, nature and concept of philosophy &amp; sociology in context of education.</li> <li>To understand the various schools and related thinkers and reflections of their ideology on education.</li> <li>To understand the society, culture and the process of socialization.</li> <li>To understand the concept of diversity, inequality and marginalization.</li> <li>To understand the elements of constitution &amp; its impact on education.</li> <li>To understand the inequality and challenges of the education system.</li> </ul>
Paper II	Psychological Perspective of Education	To enable the pupil teachers:  To understand the concept of Educational Psychology  To understand about the concept of Growth & Development.

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		<ul> <li>To understand the concept and developmental dimensions of childhood and adolescence.</li> <li>To develop a critical understanding towards the concept of Learning and its various theories</li> </ul>
Paper III	Technological Perspective of Education	<ul> <li>To understand the concept of transfer of learning.</li> <li>To enable the pupil teacher:</li> <li>To enable the learner to become effective user of technology in Education.</li> <li>To develop in students an understanding of the nature and scope of educational technology and also about the various forms of technology.</li> <li>To develop an understanding of the system approach to Education and communication theories and modes of communication.</li> <li>To develop basic skills in the production of different types of instructional material.</li> <li>To develop an awareness in students about the recent innovations and future perspectives of Educational Technology.</li> <li>To acquaint the learner with the challenges and opportunities emerging in integrating new technology in Educational process.</li> <li>To make the student familiar with new trends, techniques in education along with E-learning.</li> </ul>
Paper IV Optional papers (any one)	(a)Value and Peace Education	To enable the pupil teachers:  To understand the nature and classification of values.  To understand the importance of values in human life.  To examine the role of values in education.  To understand the concept of world peace from different perspective.
Paper IV	(b) Innovations in Education	<ul> <li>To enable the pupil teachers -</li> <li>To develop awareness of various innovative practices and experiments in education.</li> <li>To develop awareness in contemporary modern issues and inspiring Innovations around the Globe.</li> <li>To enable students to develop innovative trends for growth and healthy living.</li> <li>To develop understanding of technical devices for inspiring innovations around the Globe.</li> </ul>
Paper IV	(c) Understanding Disciplines	<ul> <li>To enable the pupil teachers:</li> <li>To understand the concept of a subject and a discipline</li> <li>To differentiate between the subject and a discipline</li> <li>To understand about knowledge and its theories related to his/her subject/discipline.</li> <li>To understand the status of academic world and relation of various subjects and discipline.</li> <li>To study the uniqueness of some disciplines.</li> </ul>

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Paper IV	(d) Reading and	To enable the nunil teachers:
Paper IV	Reflecting on	To enable the pupil teachers:
	Texts	• To enhance the capacities as readers and writers by becoming
		participants in the process of reading.
		• To develop study and reference skills. To reflect on the ideas
		expressed in the texts. To make plan, draft, edit and present a piece of
		writing related to their understanding of a text.
Paper IV	(e) Education for	To enable the pupil teacher:
1 aper 1 v	Well Being	To enable the students to understand the relation between education and
		wellbeing
	1	• To enable the students to understand the concept and dimensions of wellbeing
		• To help students to develop an understanding of theoretical perspective of
		biological wellbeing along with its daily life implications
		• To enable the students to analyse the well being in the context of psychological self
		• To acquaint the students with sociological and economical aspects of wellbeing
		To enable the students to develop an appreciation of spiritual wellbeing
Paper VI		To enable the pupil teachers:
Tuper vi	(f):Understandi	To gain an understanding of the central concepts in defining 'self' and 'identity'
l.		• To reflect critically on factors that shape the understanding of 'self'
		To build an understanding about themselves i.e. the development of self
1		as a person as well as a teacher
		To reflect on one's experiences, aspirations and efforts towards
		becoming a humane individual and teacher.
	5	To develop effective communication skills including the ability to
		listen, observe etc.
		To build resilience within themselves to deal with conflicts at different
		levels and learn to draw upon collective strengths to live in harmony with
		one's surroundings.
C-	Educational	To enable the pupil teachers:
Practicum	Psychology	To use the test and experiment in school condition
	Practical.	<ul> <li>To know the procedure of administration and interpretation of the results of different types of Test and Experiment.</li> </ul>
D-	COURSE	To enable the pupil teachers:
Professiona	CONTENT FOR	To enhance self confidence, self esteem and improve overall personality
1	PROFESSIONAL	• To sensitize themselves about proper behaviour, socially and professionally in
D1	DEVELOPMENT	formal and informal situations
Developme		• To understand to contribute themselves as a responsible member and citizen of
nt		their local, national and international community
		• To develop skills and techniques for effective communication and public speaking
		• To acquaint ,groom, train and prepare themselves for job requirement
		To understand the importance of Aestheticism in human life.
		To develop interest in the Leisure time activities.
		• To understand the use of Drama as pedagogy.
		• To understand the use of Role Play technique in the teaching- learning process.
		• To understand to integrate singing method in teaching -learning process.
		To understand the various Dance forms and then integrate in educational
		practices. SRIKRISHIN O TEASAREMY

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• To use drawing, painting, sketches, cartoon making etc in teaching learning process.
• To develop creativity through different creative Art & Craft forms.
To understand the efficacy of different Art forms in education.
• To understand the Well Being and Total Physical Fitness in one's life.
• To understand & develop the attitude towards Yoga practices for healthy life.
• To understand & develop attitude towards neutrality service to all sections of
society irrespective of their categories for Disaster Management & its
Preparedness.
<ul> <li>To understand and develop interest in gardening as a leisure time activity</li> </ul>

# B.Ed. Semester- II

Paper I &	Content Knowledge and Pedagogy of School Subject- Science	<ul> <li>To enable the pupil teachers to:</li> <li>Appreciate science as dynamic and expanding body of knowledge.</li> <li>Identify and formulate aims and objectives of science teaching.</li> <li>Use various methods and approaches of teaching science.</li> <li>Analyse the content pedagogically</li> </ul>
Paper I & II	Content Knowledge and Pedagogy of School Subjects- Commerce	<ul> <li>To enable the pupil teachers:</li> <li>To develop an understanding of pedagogy and critical issues related to the teaching learning of Commerce.</li> <li>To enable pupil teachers to appreciate the relevance of studying Commerce at senior secondary level.</li> <li>To help from an analytical perspective through comparative analysis of curriculum of different boards viz, CBSE, ISC, UP Board.</li> <li>To enable pupil teachers to become effective teachers of Commerce, and perform effective leadership roles in schools and other institutions.</li> <li>To orient pupil teachers to new developments, research and innovations in the field of teaching of Commerce.</li> </ul>
Paper I & II	Content Knowledge and Pedagogy of School Subject Hindi	उद्देश्य:—  हिन्दी शिक्षण के लिए सम्बन्धी योग्यताओं का विकास करना।  भावी शिक्षकों में हिन्दी भाषा शिक्षण की कुशलताओं का विकास करना।  भावी शिक्षकों में भाषायी कौशलो का विकास करना।  भावी हिन्दी शिक्षकों हिन्दी शिक्षण के उद्देश्यों से परिचित कराना।

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Paper I &	Content	To enable the pupil teachers to:-
II	Knowledge and	<ul> <li>Appreciate biology as a dynamic and expanding body of knowledge.</li> </ul>
	Pedagogy of	<ul> <li>Identify and formulate aims and objectives of biology teaching.</li> </ul>
	School Subjects-	<ul> <li>Use various methods and approaches of teaching biology.</li> </ul>
	Biology	Analyze the content pedagogically.
Paper I &	Content	To enable the pupil teachers to :
II	Knowledge and	• Understand the nature, aims, objectives and scope and Mathematics Appreciate
	Pedagogy of School Subject	the historical perspective and contribution of Indian Mathematicians.
	Mathematics	• Understand the principles, process relationships to design appropriate strategies for teaching them.
		• Identify and use various web- based resources for teaching and learning of
		Mathematics themselves with the concept of curriculum, text books and reference books
Paper I &	Content	To enable the pupil teachers:
II	Knowledge and	• To know about the Home Science and its Scope.
	Pedagogy of	To understand about its various functional aspects.
	School Subject- Home Science	To provide practical knowledge of its content to be skilled.
	Home Belence	To apply acquired Knowledge in our daily life activities
Paper I &	Content	To enable the pupil teachers:
II	Knowledge and	To develop an understanding of Importance of English as a discipline and its
	Pedagogy of	basic perspectives.
	School Subject- English	• To focus on the nature, scope, role & status of English Language from future
	English	perspectives.
		• To understand the place of English Language in school curriculum.
		• To understand the aims & objectives of Teaching of English with futuristic vision.
		To know the Structure of the Content (English Literature & Language),
		Functions & Acquisition of English Language.
		• To know & understand the teaching methods & pedagogical approaches of
		English Teaching.
		To develop & integrate the use of the Linguistic skills & linkage with other
		subjects.
		• To develop, articulate & nurture with qualities of a Good Teacher of English.
Paper I &	Content	To enable the pupil teachers:
II	Knowledge	• To acquire a conceptual understanding of the nature of Political Science
	and Pedagogy of School Subject- Civics	• To Plan lessons, Units based on different approaches to facilitate learning of
		Social Sciences.
		• To enable student teachers examine the prevailing pedagogical practices in
		classrooms critically and to reflect on the desired changes.
		• To acquire basic knowledge and skills to analyze and transact the Social Sciences.
		• To sensitize and equip student teachers to handle political issues.
		• To sensitize and equip student teachers to handle pointcar issues. • To realize her/his role as facilitator in enhancing Social Sciences learning in the
		real classroom situation.
		• To explore the use and relevance of different learning resources and materials i learning different units in Social Sciences.
		• To develop learning materials on selected units to facilitate learning in Political Science.

Raibarei V Krad, Lucknow

Paper I &	Content	<ul> <li>To understand different ways of assessing learner performance and providing additional support to the learners.</li> <li>To reflect upon her/his own experiential knowledge in the process of becoming a Political Science teacher.</li> </ul> To enable the pupil- teachers to
II	Knowledge and Pedagogy of School Subject- Economics	<ul> <li>Understand the importance of Economics at secondary level.</li> <li>Understand and write the objectives in behavioural terms.</li> <li>Understand the various devices and methods of teaching economics and develop skills and abilities to select appropriate methods and apply them effectively.</li> <li>Recall and revise the basic concepts of Economics as a subject at secondary level.</li> <li>Prepare lesson plan properly.</li> </ul>
Paper I & II	Content Knowledge and Pedagogy of School Subject- Geography	<ul> <li>To enable the pupil- teachers:</li> <li>To reflect on the nature and 'disciplinary role' in the school curriculum.</li> <li>To understand the nature, changes in disciplines and subjects in terms of social, political and intellectual contexts.</li> <li>To study the relationship between academic disciplines and school subjects.</li> <li>To acquire conceptual understanding of the processes of teaching and learning geography to acquire basic knowledge and skills to analyze and transact the geography curriculum effectively following wide-ranging teaching learning strategies.</li> <li>To gain insight into the general aims and specific objectives of teaching geography.</li> <li>To plan lessons based on different approaches to facilitate learning of geography.</li> <li>To realize her/his role as facilitator in enhancing geography learning in the real classroom situation</li> </ul>
Paper III	Inclusive Education	<ul> <li>To enable the pupil- teachers:</li> <li>To familiarize student- teachers with the concept of Inclusive Education and appreciate its Philosophy in the context of Education for All.</li> <li>To make them able to identify and understand the problems of socially disadvantaged children</li> <li>To identify and address the diverse needs of all learners.</li> <li>To acquaint with the trends and issues in Inclusive Education To develop capacity of student- teachers for creating an inclusive School</li> <li>To appreciate various inclusive practices to promote Inclusion in the classroom.</li> </ul>
Paper IV	School Management and Hygiene	<ul> <li>To enable the pupil- teachers to</li> <li>Get acquainted with the concept and concerns of School Management.</li> <li>Scientific practices of educational management and keep him to apply it in work situation.</li> <li>Develop an understanding of the role of the headmaster and the teacher in school management.</li> <li>Understand the importance of good health and positive attitude towards exercise and health.</li> </ul>

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B-Optional Papers (Student has to choose one paper) Paper V	(a):Environment al Education	<ul> <li>To enable the pupil- teachers to:</li> <li>Understand the concept of environment and its various aspects.</li> <li>Become aware and sensitive towards environment and its allied problems.</li> <li>Realize the need of environment protection and sustainable development.</li> <li>Acquire knowledge about the different methods of teaching in environmental education.</li> <li>Acquire knowledge of the tools and techniques for the evaluation of environmental education.</li> </ul>
Paper V	(b): Computer Education	To enable the pupil- teachers:  To acquaint students with basic elements of computers and its use in education.  To acquaint them with various types of educational software packages.  To prepare students for using the computers for educational purposes.  To acquaint them with information technology and Internet.
Paper V	(c): Gender Issues and Human Rights Education	To enable the pupil teachers to:  Develop understanding of basic concepts related to Gender.  Learn about gender issues in school and curriculum.  Develop understanding about gender, power and sexuality in relation to education  Develop understanding of different personality and their assessment
Paper V	(d): Education for Happiness	<ul> <li>To enable the pupil teachers to:</li> <li>Understand the concept of happiness and its interrelationship with education.</li> <li>Understand the role of happiness in education.</li> <li>Understand the demand of happiness in education and its reality (issues and problems) in Indian education system.</li> <li>Accustom with the underpinnings of happiness in various schools of philosophy.</li> <li>Know the perspective of various eastern and western philosophers on happiness.</li> <li>Understand the concept of education for happiness and its silent features.</li> <li>Understand the importance of education for happiness and implement in his teaching.</li> </ul>
Paper V	(e): Comparative Education	<ul> <li>To enable the pupil teachers to:</li> <li>Define and explain the term comparative education.</li> <li>Discuss the purposes of studying comparative education.</li> <li>Critically review the historical development of comparative education as a discipline.</li> <li>Analyse the methods used in comparative education.</li> <li>Classify approaches to studying comparative education.</li> <li>Describe the education systems and practices of selected developing countries.</li> <li>Compare the education systems of selected developed and developing countries.</li> <li>Critically analyse the education system in a global perspective.</li> <li>Evaluate global issues in comparative education.</li> <li>Compare primary, secondary, and higher education systems in selected countries.</li> </ul>

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Paper V	(f): Lifelong	To enable the pupil teachers:
•	Learning	To improve understanding regarding gerontology and its various
		dimensions,
		• To educate students regarding critical issues of ageing workforce, its
		prospects, opportunities and challenges,
		• To promote awareness regarding national policies and programs in
		context of ageing and adult continuing education.

# B.Ed. Semester-III

Paper I:	Measurement and Evaluation in Education	<ul> <li>To enable the pupil teachers to:-</li> <li>Comprehend the concept and purpose of measurement and evaluation.</li> <li>Understand the various techniques and tools of evaluation.</li> <li>Know the various examination systems of India at different levels.</li> <li>Compute and apply the statistical techniques in measurement and evaluation.</li> </ul>
Paper II	Theoretical	To enable the pupil teachers:
	Foundations of Curriculum	<ul> <li>To enable the learners to understand the basic concept of curriculum, syllabus and textbooks.</li> <li>To enable the learners to understand various types, methods, determinants and motives of curriculum development.</li> <li>To enable the learners to understand various curriculum practices in India and abroad.</li> <li>To enable the learners to design an innovative curricular model.</li> </ul>
Paper III	Guidance and	To enable the pupil teachers:
	Counseling	<ul> <li>To understand the concept, need and meaning of guidance and counseling.</li> <li>To get acquainted with the principles, various areas and procedure of guidance.</li> <li>To develop understanding about the role of school in guidance.</li> <li>To get acquainted with the principles and process of counseling.</li> <li>To realize the qualities and role of a school counselor.</li> <li>To acquire an idea about the need of counseling for children with special needs.</li> </ul>

## B.Ed. Semester IV

Paper I	Contemporary India and Education	To enable the pupil teachers to:  Understand the historical developments in policy framework related to education Appreciate the unity and strengths of Indian diversities based on region, religion, gender, languages, socio-economic factors like caste, means of livelihood etc.  Acquire knowledge about the salient features of our Constitution and constitutional measures to protect diversities  Appraise about the policy initiatives taken in educational reform during pre and post independent India.  Develop overall understanding of the working and recommendations of various Commissions and Committees constituted for improving education in the country.
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SRI KRINNA UTT ACADEMY 2D/HS- Windayan Yojna Raibareily Load, Lucknow Appreciate Innovations and new measures towards universalization of education including the role of Panchayati Raj Institutions
Understand the structure of education system in contemporary society
Develop understanding of the issues and challenges faced by Indian contemporary Society.

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