Criterion – 2

Teaching-Learning and Evaluation

NAAC- SSR (2nd Cycle)

ETERNAL UNIVERSITY

BARU SAHIB, SIRMOUR-173101
HIMACHAL PRADESH

2.6.1(2)

Program and Course outcomes-II

ETERNAL UNIVERSITY
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Programme: Ph. D MANAGEMENT

PROGRAMME OUTCOMES (POs)

PO 1: This degree program is providing to students to study concepts and techniques needed to understand a range of business disciplines as well as to research issues arising in professional business practice.

PO 2: To provide students with the opportunity to learn the latest academic theories, concepts, techniques and applications with emphasis on teaching and research in the field of management.

PO 3: To extend the knowledge, expertise and skills of students through the application of research to business problems and issues by including internships, teaching experiences and special study projects as a part of the curriculum.

PO 4: To develop the student's ability to carry out independent research at an advanced level and enhance their ability to deliver their ideas, research methodology and findings using formal presentations with critiques of their analytical, written, oral and media presentation skills in business, professional and educational environments.

PO 5: To create opportunities for the University's bachelor and master's degree students to continue their business education by undertaking the doctoral degree course of students.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1: Demonstrate advanced knowledge and competence in the latest academic theories, concepts, technology-enabled opportunities, financially justified analysis, research operations and market-based economy in a global field of business administration.

PSO 2: Demonstrate integration from business and non-business disciplines to generate novel ideas, strategies and practical approaches to address business issues faced by organizations.

PSO 3: Demonstrate effective research skills including formulation of research problem; integration of previous publications into an appropriate literature review, design of a research study, data analysis and ability to summarize and present the results.

PSO 4: Generate, evaluate and assess the ethical obligations and responsibilities of business for responsible management.

PSO 5: Demonstrate an ability to address complex industry challenges using the frameworks of industry rules and regulations that build prescriptive conclusions and real-world experience and knowledge.

Course	Course Outcomes (COs)
1ST Semester	
(MGMT -601) Advances in Management thought	CO1: Understand the concept and process of management. CO2: Understanding of management and its historical perspective. CO3: To delineate management functions and to understand the unique situation of management within research.
(MGMT-602) Advances in Marketing Management	CO1: Understanding of the Modern-day marketing functions in the corporate enterprises and various research and policy implications. CO2: Develop knowledge and understanding of the various aspects of modern marketing management. CO3: Enable students to identify research issues in the specialization area. CO4: Develop insight of students as to the area and topic in the area that they may work up to develop their Ph.D. proposals.
(MGMT-603) Finance and Financial Markets	CO1: Familiarize the students with advanced knowledge in the discipline of financial management. CO2: Knowledge of emerging issues and trends in financial markets and innovations in the financial sector. CO3: Practical knowledge along with the conceptual understanding of the subject. CO 4: Providing an international perspective in the field of management to the students.
(MGMT-604) Advance Human Resource Management	CO1: Understanding the advanced knowledge in the discipline of human resource management and integrating the steps necessary for effective implementation in the organization. CO2: Develop ways in which human resources management might diagnose a business strategy and then facilitate the internal change necessary to accomplish the strategy. CO3: Evaluate the developing role of human resources in the global arena.
(MGMT-605) Global Business Environment	CO1: Understanding the important linkages between the domestic economy and its external sector. CO2: Conceptual clarity of the theoretical aspects of international trade and finance. CO3: Examine the broad pattern of changes in the international economic policy. CO 4: Business implications of the international economic environment. CO 5: Knowledge about the basic macroeconomic relationships as they affect the behaviour of firms and to incorporate international issues in designing corporate strategies in a fast-changing environment.

MGMT-699 Research Methodology	CO1: Understanding to Develop an understanding of various kinds of research, objectives of doing research, research process, research designs and sampling. CO2: Understanding the use of tools and techniques for exploratory, conclusive and causal research, CO 3: Understand the concept of measurement in empirical systems and its validity and reliability. CO4: Use of statistical techniques for analysis of research data and to realize the applications of Business research. CO4: Understanding to have a basic awareness of data analysis and hypothesis testing procedures.

Programme: B.Com. (Hons.) (Three-year degree programme)

PROGRAMME OUTCOMES (Pos, PSOs & COs)

PO1: Gain a thorough grounding in the fundamentals in different areas of business, Commerce and Finance.

PO2: Develop the skill of applying concepts and techniques used in Commerce.

PO3: Apply ethical principles in business, commerce and technology.

PO4: Effectively communicate in business, commerce and technological environment.

PO5: Develop an attitude to perform effectively and efficiently as a leader as well as a member of a team in a business environment.

PO6: Ability to engage in lifelong learning.

PO7: To integrate knowledge, skill and attitude that will sustain an environment of learning and creativity among the students.

PO8: Exposure about entrepreneurship.

PO9: Enabling student to be capable of making decisions at personal and professional level.

PO10: Getting prepared for post graduate studies and to achieve success in their professional careers.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Students will be able to develop and demonstrate knowledge and skills to prepare accounts of corporate sectors and also the knowledge in current issues in the area of computerized set of accounting.

PSO2: Students also acquire skills to work as tax consultant, audit assistant and other financial supporting services.

PSO3: Students will be able to play roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision making.

PSO4: Students will learn relevant managerial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

PSO5: Students will be able to develop and demonstrate knowledge of statistical tools used in business analysis.

PSO6: Students will gain thorough systematic and subject skills within various disciplines of commerce, business, accounting, economics, finance, auditing and marketing.

PSO7: Learners will be able to recognize features and roles of businessmen, entrepreneur, managers, consultant, which will help learners to possess knowledge and other soft skills and to react aptly when confronted with critical decision- making.

PSO8: Learners will acquire the skills like effective communication, decision- making, problem solving in day to day business affairs.

PSO9: Learners will involve in various co-curricular activities to demonstrate relevancy of foundational and theoretical knowledge of their academic major and to gain practical exposure.

PSO10: Learners can also acquire practical skills to work as tax consultant, audit assistant and other financial supporting services.

Course	Course Outcomes (COs)
B. Com. (Hons.) 1st Sem.	
Business Regulatory Framework (BC-101)	**CO1:** Identify the essential elements of the legal system including the main sources of law. **CO2:** The student should know manage the companies in crisis by learning legal implications. **CO3:** Equip the students about the legitimate rights and obligations under the Sale of Goods Act. **CO4:** Understand basic aspects of contracts for making the agreements, contracts and subsequently enter valid business propositions.
Financial Accounting (BC-102)	**CO1:** Understand the theoretical framework of accounting and to prepare financial statements. **CO2:** Demonstrate the use of double-entry and accounting systems, record transactions and events. **CO3:** Develop the skill of preparation of trading and profit and loss account and balance sheet using computerized accounting. **CO4:** Prepare bank reconciliation statement and to identify and rectify errors.
Business Organization and Management (BC-103)	**CO1:** Learn business activities to compete in competitive world. **CO2:** Understand entrepreneurship from local to international perspective. **CO3:** Evaluate the application of functional areas of business activity. **CO4:** Analyze decision- making and communication.

	CO5: Evaluate the impact of legal, social, and economic environment on business

Essentials of E-Commerce (BC-104)	**CO1:** Understand the basics of e-commerce, current and emerging business models. **CO2:** Familiarize with basic business operations such as sales, marketing, HR etc. on the web. **CO3:** Enhance the students' skills for designing and developing website. **CO4:** Identify the emerging modes of e-payment. **CO5:** Understand the importance of security, privacy, ethical and legal issues of e-commerce.
B. Com. (Hons.) 2nd Sem.	
Cost Accounting (BC-105)	**CO1:** Understand thoroughly the conceptual framework of cost accounting; identification of differences between different financial and cost accounting; cost concepts and elements of cost; preparation of cost sheet. **CO2:** Outline the procedure for purchase of material, storing and issue of materials and valuation of materials. **CO3:** Calculate earnings of Workers under different methods. **CO4:** Choose basis for allocation and apportionment factory indirect costs and absorption of overheads.
Business Environment (BC-106)	**CO1:** Understand the purpose and types of businesses and how they interact with key stakeholders and the external environment. **CO2:** Understand the importance of person effectiveness as the basis for effective team and organizational behavior. **CO3:** Recognize the mechanism of business and finance in the light of professional ethics and values.
Business Economics (ECON-110)	**CO1:** Ability to understand the concepts of economics and their use in price determination. **CO2:** Understanding the economic dimensions and perspectives applicable to business entities.
B. Com. (Hons.) 3rd Sem.	
Corporate Accounting (BC-201)	**CO1:** Application of the provisions of Companies Act for issue, forfeiture and reissue of shares. **CO2:** Develop an understanding of accounting for share capital and debentures. **CO3:** Competency of preparing financial statements of a company. **CO4:** Develop an understanding and skill of preparing cash flow statements. **CO5:** Prepare consolidated balance sheet for Holding company.

Fund Based Financial Services (BC-202)	**CO1:** Understand the meaning and scope of financial markets as well as institutions in India. **CO2:** Understand the concepts of venture capital funds. **CO3:** Explain underwriting of capital issues and trends in underwriting in India. **CO4:** Explain concept of leasing and factoring. **CO5:** Examine the financial services industry.

Company Law (BC-203)	**CO1:** Understand the regulatory aspects and procedural steps of Companies Act & Rules, 2013. **CO2:** Compare and contrast Memorandum of Association (MoA) and Articles of Association. **CO3:** Description of powers and duties of company directors and procedures for convening statutory and other meetings. **CO4**: Understanding circumstances and the procedure for winding up of the company. **CO5:** Follow the basic legal documents and their usage essential for operations and management of company.
Principles of Marketing (BC-204)	**CO1:** Develop understanding of basic concepts of marketing, marketing philosophies and environmental conditions effecting marketing decisions of a firm. **CO2:** Understand the dynamics of consumer behavior and process of market selection through STP stages and marketing segmentation. **CO3:** Understand and analyze the process of value creation through marketing decisions involving product development. **CO4:** Understand and analyze the process of value creation through marketing decisions involving product pricing and its distribution. **CO5:** Understand and analyze the process of value creation through marketing decisions involving product promotion.
Human Resource Management (BC-205)	**CO1:** Understand basic nature and importance of human resource management in an organization. **CO2:** Understand different tools used in forecasting and planning human resource needs. **CO3:** Demonstrate the ability to prepare a selection strategy for a specific job. **CO4:** Realize the importance of performance management system in enhancing employee performance. **CO5:** Understand modern HRM to meet the challenges of changing business environment.

International Business (BC-206)	**CO1:** Understand the process of evolution and growth of international business under changing dynamics of the diverse international business environment. **CO2:** Analyze the theoretical dimensions of international trade and intervention measures adopted in the context of Balance of payment account and its components. **CO3:** Understand the significance and role played by various international economic organizations such as the WTO, UNCTAD, IMF and World Bank. **CO4:** Familiarizing with the basic features of the foreign exchange market. **CO5:** Critically examine the concept, form and issues of foreign direct investment.
B. Com. (Hons.) 4thSem.	
Management Accounting (BC-207)	**CO1:** Understand the conceptual framework of Management Accounting. **CO2:** Understand the concept of marginal cost and marginal revenue. **CO3**: Preparation of income statements using absorption and variable costing. **CO4:** Learning of cost-volume-profit analysis and break-even analysis using mathematical and graphical approaches. **CO5:** Understand budgetary control system as a tool of managerial planning. **CO6:** Understand management accounting issues of responsibility accounting, divisional performance measurement and transfer pricing. **CO7:** Understand the concept of relevant and irrelevant costs and make decisions related to different business situations.

Fundamentals of Investment & Stock Market (BC-208)	**CO1:** Learn the basics of investing in stock market, the investment environment as well as risk & return. **CO2:** Understand bond valuation & role of credit rating agencies. **CO3:** Outline role of Mutual Funds in capital market development. **CO4:** Analyze two securities portfolio using Harry Markowitz model, Calculating portfolio risk and return. **CO5**: Explaining CAPM and evaluating Mutual Funds and Financial derivatives. **CO 6:** Explain role of stock exchanges in India.
Workshop on E-Accounting and E-filing of Returns (BC-209)	**CO1:** Understand the concept of e-Accounting**, c**reation and designing of groups, vouchers and accounts. **CO2:** Explain database design for accounting and documenting transactions using vouchers. **CO3:** Decomposing Accounting reports to appreciate information content. **CO4:** Creating data table defining relationships and constraints. Designing accounting vouchers &reports. **CO5:** Conceptual framework of E-Filing of returns income tax and Efiling of ITRs.

Financial Management (BC-210)	**CO1:** Understanding the role and purpose of the financial management function and its impact on economic environment. **CO2:** Knowing the nature and scope of financial management as well as time value of money and risk return trade off. **CO3:** Estimation of various capital structure theories and factors affecting capital structure decisions in a firm. **CO4:** Critical examination of theories of dividend and factors affecting dividend policy. **CO5:** Computation of working capital requirement.
Indian Financial System (BC-211)	**CO1:** Understanding the role of financial system in economic development of a nation. **CO2:** To learn about Indian financial markets, regulators of financial markets, financial institutions. **CO3:** Getting enhanced knowledge of financial services in India. **CO4**: Understanding the working procedures of financial institutions and mutual funds role in capital market, Non-banking Financial Companies (NBFCs). **CO5:** Description of conceptual framework of financial services and financial institutions in India.

B. Com. (Hons.) 5thSem.	
Financial Reporting and Analysis (BC-301)	**CO1:** Describing conceptual framework of financial reporting in the context of financial statements. **CO2:** Learning reporting of transactions in accordance with international accounting standards. **CO3:** Analysis and interpretation of a case of financial statements of companies. **CO4:** Knowledge of preparation and presentation of financial accordance with international accounting. **CO5: U**nderstanding of emerging areas in financial reporting - Accounting for E-commerce business, value added statements and integrated reporting.
Income Tax (BC-302)	**CO1:** Understanding basic concepts in the law of income tax and determine the residential status of different persons. **CO2:** Identifying heads of income of 'Salaries' and 'Income from House Property'. **CO3:** Perfection in computation of income under the head 'Profits and gains of business or profession', 'Capital gains' and 'Income from other sources. **CO4:** Understand clubbing provisions, aggregate income after set-off and carry forward of losses. **CO5**: Computation of taxable income and tax liability of individuals and firms. **CO6:** Developing skills to file online returns of income.

Foreign Exchange Management (BC-303)	**CO1:** Understand the international monetary system of Bimetallism, Gold standard, Bretton Woods's system, exchange rate, etc. **CO2:** Regulation and management of foreign exchange. Determination of Exchange Rates. **CO3:** Description of Foreign Exchange Markets and Forward Market. **CO4:** Methods and mechanism of current account transactions, capital account transactions. **CO5**: Export of goods and services under the Foreign Exchange Management Act, 1999. **CO6:** To understand the basic concepts of BOP.
Advanced Accounts (BC-304)	**CO1:** Understand Amalgamation of companies. International Accounting Standard 12: Income Taxes. **CO2:** To describe liquidation of companies and lease. **CO3:** Preparation of Accounts of Electricity Companies and International Accounting Standard 33: Earning Per Share. **CO4:** Examination of Accounts of Holding Companies under section 129 of Companies Act 2013. **CO5:** Preparation of consolidated P&L a/c and Balance Sheet including intercompany and chain holdings. **CO6:** Learning International Accounting Standard 23: Consolidated and Separate Financial Statements

Banking and Insurance (BC-305)	**CO1:** Explain the structure, functions and modern banking services. **CO2:** Outline bank deposits, lending and role of RBI in credit control. **CO3:** Summarize bank management and negotiable instruments. **CO4:** Summarize the basic principles of insurance. **CO5:** Explain types of insurance.
Summer Training and Project Report (BC-306)	**CO1:** Competency in the linking of accounting tolls and software's in the real-world enterprise. **CO2:** To learn the components of preparing and presentation of training report. **CO3:** Learning the organizational working and work as a team player. **CO 4:** To understand the importance of working in teams and to become an effective team member. **CO5:** Ability to identify own strengths and weaknesses and use for self-development and improving interpersonal communication skills.
B.Com. (Hons.) 6th Sem.	

Goods and Service Tax (BC-307)	**CO1:** Connect with the genesis of goods and services tax (GST), decipher the constitutional amendment carried out to install GST in India and comprehend the composition and working of GST council. **CO2:** Understand the meaning of supply under GST law, differentiate between intra-state and inter-state supply, comprehend rules related to the place of supply and compute the value of supply. **CO3:** Comprehend the utilization of input tax credit and the reverse charge mechanism of paying GST and to know the procedure for claiming refund under GST law. **CO4:** Understand the provisions for registration under GST along with special provisions such as those related to anti-profiteering; avoidance of dual control; e-way bills and penalties. **CO5:** Knowing the basic concepts of Customs Act and to compute the assessable value for charging customs duty.
Labour Laws (BC-308)	**CO1:** Understand evolution of industrial relations and its significance in managerial world. **CO2:** Imbibe how to interact, negotiate and transact with trade unions. **CO3:** Understand the basics of the Employees Provident Fund & Miscellaneous Provisions Act, 1952. **CO4:** Design and understand the discipline measures and address grievance mechanisms. **CO5:** Understanding the Employee's Compensation Act, 1923, The Payment of Bonus Act, 1965, Payment of Gratuity Act, 1972 and Payment of Wages Act, 1936.
Entrepreneurship (BC-309)	**CO1:** Understand the concept of entrepreneurship in the context of Indian economic scenario. **CO2:** Gather knowledge and ideas on the existing support system for entrepreneurial orientation. **CO3:** Understand enterprise formation process for gaining ideas as to creation of an enterprise for pursuing a career. **CO4:** Understand requirements of post-enterprise creation for effective operation of the business. **CO5:** Gain knowledge on available growth strategies for implementing effective suitable strategy for expansion and growth.
Governance, Ethics & Social Responsibility of Business (BC-310)	**CO1:** Understanding and develop conceptual thinking about politics and approaches to moral reasoning. **CO2:** Knowledge about the Concept of business and Ethics in business. **CO3:** Comprehend the principles and theories of business ethics**.** **CO4:** Conceptual framework of corporate governance. **CO5:** Knowledge about the Codes & Standards on Corporate Governance.

Auditing (BC-311)	**CO1:** Understanding the concept of audit and assurance and the functions of audit, corporate governance, including ethics and professional conduct. **CO2:** Demonstrate how the auditor obtain and accepts audit engagements. **CO3:** The reflection of Audit work in different types of audit report, written representations and the final review and report. **CO4:** Provide and assimilate information leading to failure of organization and corporate scams. **CO5:** Comprehend the governance framework for an organization provided by different regulatory bodies in India and Abroad.
Cyber Crime and Laws (BC-312)	**CO1:** Identification of cyber risk associated with online activities. **CO2:** Essentials of preparing laws for safe working in the vertical scenario having varied access points, data sources, network and system related issues, especially in online transactions. **CO3:** Generate and preserve electronic evidences for personal and professional use. **CO4:** Work in virtual space safely and with business process or products confirming to the regulatory framework and not falling under the ambit of cyber-crimes. **CO5:** Analyzing specific cases and finding pertinent facts for resolutions.

Programme: B.Sc. (Hons.) Economics (Three-year degree programme)

PROGRAMME OUTCOMES (POs)

PO 1: Providing with the opportunity to study economics in the greatest depth whilst also providing a considerable amount of choice regarding both the areas of core economics and other applied economics.

PO 2: To demonstrate a global perspective and awareness on working of an economy. The course will sharpen analytical skills of students through integrating knowledge of economic theory with decision making techniques. It will demonstrate professionalism, self-awareness, leadership and effective communication skills.

PO 3: To use information and knowledge effectively: scanning and organizing data, synthesizing and analysing in order to abstract meaning from information and to share knowledge.

PO 4: An ability to use current techniques, skills and tools necessary for studying economics.

PO 5: An ability to recognize the importance of professional development by pursuing postgraduate studies or face competitive examinations that offer challenging and rewarding careers in economics.

PO 6: Strengthening conceptual building to solve practical decision-making problems, both individually and as part of teams using techniques such as case analysis, projects and assignments.

PO 7: Demonstrating a critical awareness of current issues in economics informed by leading edged research and practice in the field.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1: Introductory knowledge of microeconomics/macroeconomics: Understanding the basic concepts of micro-macroeconomics for different sectors of the economy. Application of laws in the derivation of demand and supply under different market scenarios.

PSO 2: Understanding history of economic ideas/thoughts: Acquisition of in-depth knowledge about development and evolution of economic thoughts of different schools from ancient world to the present day.

PSO 3: Derivation of methodologies for determining economic variables: Derivation of tools and techniques helping empirical determination/estimation of demand, supply, output, money

supply, inflation, employment, poverty, GDP, BOP and optimum input usage. Distribution of resources for maximum welfare and identifying causes of market failure and its consequences.

PSO 4: Indian economy and World: Understanding the behaviour of Indian economy and world economy and the working of economic and planning system of India. Majorproblems associated with the development of Indian economy. Economic evaluation of different government schemes and programmes to tackle these problems. Studyingdifferent sectors of the economy andimpact of FDI and foreign trade on Indian economy.

PSO 5: Money and banking: Understanding the behaviour of financial and money markets and their performance. Cost-Benefit analysis for making investment decisions. Identifying fiscal and monetary tools to regulate the economic forces.

Course	**Course Outcomes (COs)**
B. Sc. (Hons.) Economics 1st Sem.	
Microeconomic Theory – I **(ECON 101)**	**CO 1:** Understanding the role of micro economics to study human behaviour at an individual level and at producer level. **CO 2:** Decision taking criteria to satisfy unlimited wants from limited resources. **CO 3:** Decision taking criteria regarding use of inputs (factor cost –land, labour, capital). **CO 4:** Understanding the concepts of elasticity in relation to changes in income and price. **CO 5:** Analysing the process of consumer surplus and producer surplus. **CO 6:** Price determination under different market scenario. **CO 7:** Wage determination under different market structure. **CO 8**: Understanding the market signal affecting consumer and producer behaviour.

	CO 9: Analysing theories of production and cost in short and long run.
Macroeconomic Theory –I **(ECON 102)**	**CO 1:** Understanding the behaviour of economy at the aggregate level and studying the methodology of national income measures. **CO 2:** Knowing the basic economic principles, policies, theories, models, and analytical methods of macroeconomics. **CO 3:** Identification of economic problems and measures to solve them, assessing results, and determining alternative courses of action using various tools. **CO 4**: To understand working of monetary and fiscal policy options related to economic stabilization in the short run and in the long run. **CO 5:** Formulation and assessment of macroeconomic policy initiatives.
Mathematical Methods For Economics-I **(MATH 113)**	**CO 1:** Students will be able to apply the basic mathematical tools & techniques in economic analyses and interpretations. **CO 2:** To make students capable to understand basic mathematics required for understanding economics. **CO 3:** To familiarize students with the use of mathematics as a tool to analyze economic phenomena.
B. Sc. (Hons.) Economics 2nd Sem.	
Microeconomic Theory - II **(ECON 103)**	**CO 1:** Price determination under different market scenario.

	CO 2: Wage determination under different market structure. **CO 3**: Understanding the market signal affecting consumer and producer behaviour. **CO 4**: Analysing theories of production and cost in short and long run.
Macroeconomic Theory – II (ECON 104)	**CO 1:** Knowing the basic economic principles, policies, theories, models, and analytical methods of macroeconomics. **CO 2:** Identification of economic problems and measures to solve them, assessing results, and determining alterative courses of action using various tools. **CO 3**: To understand working of monetary and fiscal policy options related to economic stabilization in the short run and in the long run. **CO 4:** Formulation and assessment of macroeconomic policy initiatives.
Regional Economics (ECON 105)	**CO 1:** Understanding the basic and fundamental knowledge of concepts, theories and practices in the field of regional economics. **CO 2:** Studying regional and social accounting techniques with special reference to under developed regions. **CO 3:** Understanding the nature of dualistic economies and the importance of balanced regional development. **CO 4:** Analysing linkages among different sectors of the economy.

	CO 5: Allocation of resources at regional level in achieving specific targets at national level. **CO 6:** Overcoming regional imbalances and inequalities in Indian economy.
B. Sc. (Hons.) Economics 3rd Sem.	
Economics of Agriculture **(ECON 201)**	**CO 1:** Identification and classification of the problems of agricultural activities and understanding to get the maximum satisfaction from existing resources. **CO 2:** Understanding the role of agriculture in economic development and also the factors affecting agricultural growth. **CO 3:** To acquaint the students by role of institutions in agricultural development. **CO 4:** Understanding different economic factors of agricultural development.
B. Sc. (Hons.) Economics 3rd Sem.	
Economics of Agriculture **(ECON 201)**	**CO 1:** Identification and classification of the problems of agricultural activities and understanding to get the maximum satisfaction from existing resources. **CO 2:** Understanding the role of agriculture in economic development and also the factors affecting agricultural growth. **CO 3:** To acquaint the students by role of institutions in agricultural development. **CO 4:** Understanding different economic factors of agricultural development.

Economics of Industry **(ECON 202)**	**CO 1:** Getting acquaintance of analytical skills required for understanding problems in industrial economics. **CO 2:** Analysing aspects of strategic interaction between firms and the determinants of industrial structure. **CO 3:** Understanding of how theories from industrial economics can help one in comprehending the behaviour of firms in imperfectly competitive markets. **CO 4**: Understanding the most important theories concerning the organisation of industries and the behaviour of firms. **CO 5:** Description of pricing behaviour of firms with market power and its welfare implications. **CO 6:** Recognition of the basic determinants of market structure and the key issues in competition policy and regulation.
Indian Economy **(ECON 203)**	**CO 1:** U3nderstanding the various aspects of India's economy since Independence. **CO 2:** Developing a perspective on the different problems and approaches to economy. **CO 3:** Understanding the role of the Indian economy in the global context and factors affecting the process of growth. **CO 4:** Analysing the major development challenges in India; structural transformation, employment, unemployment trends poverty and inequality. **CO 4:** Programmes and emerging perspectives, policy of food and nutrition security of the poor.

Statistical Methods For Economics (STAT 213)	**CO 1:** To acquaint the students with various statistical tools and techniques applied in economics. **CO 2:** To provide fundamental knowledge of basic and advance statistical methods in economics. **CO 3:** In addition to the theoretical approach, the students will be able to learn how to use the software for analyses of empirical data.
B. Sc. (Hons.) Economics 4th Sem.	
Labour Economics (ECON 204)	**CO 1:** Understanding the functioning of labour markets through interaction of workers and employers and the dynamics of the markets for wage **CO 2:** Studying the industrial disputes, steps to prevent disputes, methods of settlement of industrial disputes, collective bargaining and also labour participation in management. **CO 3:** Understanding the need for social security measures in India and important labour legislation in India.
International Economics (ECON 205)	**CO 1:** Getting familiarity with the main economic theories and models of international trade. **CO 2:** Application of economic reasoning to issues around the globe. **CO 3**: Recognition of the cause of trade, sources of the gains from trade and the domestic and international distribution of gains.

	CO 4: Analysing consequences of trade policy measures—including tariffs and quantitative restrictions. **CO 5:** Understanding of international economics and the determinants of exchange rates and the balance of payments.
Money and Financial Markets **(ECON 206)**	**CO 1:** Understanding the basics of financial institution and markets. **CO 2:** Knowing the functions and operationalization of financial institutions. **CO 3:** Understanding the evolution of financial institutions. **CO 4:** Determination of short-term interest rates and their structure. **CO 5:** Understanding the efficiency of foreign exchange markets.
Public Economics **(ECON 207)**	**CO 1:** Introducing concepts related to government revenue and expenditure. **CO 2:** Fundamental knowledge and exposure of the concepts, theories and practices in the field of public economics **CO 3:** Application of basic tools of economics to public sector like education and health. **CO 4:** Role of public-private sector in the development of an economy. **CO 5:** Understanding the steps followed in budget preparation by Indian parliament and presentation of budget. **CO 6:** Allocation of duties and responsibilities to state and centre under Indian constitution.
B. Sc. (Hons.) Economics 5th Sem.	

Development Economics **(ECON 301)**	**CO 1:** Familiarize students with basic concepts of Economic Development and Growth. **CO 2:**Understand different strategies and models of Economic Development. **CO 3:**Understand the applicability of different strategies and models in the growth and developmentprocess.
History of Economic Thought **(ECON 302)**	**CO 1:** Views and ideas of economists starting from ancient Greek period to till present. **CO 2:** Methodology to know the measurement of goods and the basis on which they can be exchanged in the market. **CO 3:** Understanding the importance of different factors of production and how they get their rewards. **CO 4:** Knowing the history of materialistic world and its evolution. **CO 5:** Learning the contribution of Nobel Laureates in Economics
Econometrics **(ECON 303)**	**CO 1:** Acquaintance with various statistical & mathematical tools and techniques applied in economics and policy making. **CO 2:** Demonstrating a familiarity with the properties and applications of several families of statistical distributions to econometric problems. **CO 3:** Understanding the application of different models and their usefulness in economics. **CO 4:** Studying the relevant time series and panel data models for economic policy making and future forecasting.

	CO 5: Learning the application of programme packages to do time series and panel data analyses of empirical data.
Resources and Environmental Economics (ECON 304)	**CO 1:** Extending knowledge about regarding the scarcity of environment resources. **CO 2:** Understanding the inter-linkages of human activities and environment. **CO 3:** Understanding the importance of common property rights in case of public/state resources. **CO 4:** Evaluating cost and optimal level of pollution in the economy. **CO 5:** Regulation of state natural resources through taxes/levies on users. **CO 6:** Detail study of different environmental problems and steps/measure taken to control them.
Introduction to Computer and Office Automation (CSE333)	**CO 1:**Bridge the fundamental concepts of computers with the present level of knowledge of the students. **CO 2:**Create and perform data calculations with Excel spreadsheets and presentations. **CO3:** Students do possess required skill and can also be employed as Tally data entry operator.
B. Sc. (Hons.) Economics 6th Sem.	

Comparative Economic Development (ECON 306)	**CO1:** Describing different perspective regarding economic development. **CO 2:** Assessing the historical development of different countries **CO 3:** Studying in detail the process of development of different countries through case studies. **CO 4:** Understanding the very nature and structure of agriculture sector in developed countries like Britain, Japan and USSR **CO 5:** Analysing the role of manufacturing sector in the development process of developed countries. **CO 6:** Comparison of the development process and policies of developed countries and the present scenario of their development.

Institutional Economics **(ECON 307)**	**CO 1:** To familiarize the student with the different types of institutions. **CO 2:** To acquaint the students with the financial institutions and separation of ownership and control, incentive commitment problems of financial institutions. **CO 3:** To understand the legal institutions and their economic performance. **CO 4:** To explain the political economy of institutional changes, political economy of privatization and legal transplantation.
Health Economics **(ECON 308)**	**CO 1:** Understanding the problems in the market for health care**.** **CO 2:** Analysing health care markets with economics. **CO 3:** Describing the demand for health and health care. **CO 4:** Management of health care professional and hospitals' services. **CO 5:** Understanding public policies to enhance access with low cost. **CO 6:** Role of WHO in National Health Policy (NHP). **CO 7:** Measures/steps taken in building high class health facilities. **CO 8**: Public-private partnership in creating health care infrastructure.

Economics of Industry **(ECON 202)**	**CO 1:** Getting acquaintance of analytical skills required for understanding problems in industrial economics. **CO 2:** Analysing aspects of strategic interaction between firms and the determinants of industrial structure. **CO 3:** Understanding of how theories from industrial economics can help one in comprehending the behaviour of firms in imperfectly competitive markets. **CO 4**: Understanding the most important theories concerning the organisation of industries and the behaviour of firms. **CO 5:** Description of pricing behaviour of firms with market power and its welfare implications. **CO 6:** Recognition of the basic determinants of market structure and the key issues in competition policy and regulation.

Programme: BBA (Three year degree programme)

PROGRAMME OUTCOMES (POs)

1. It will nurture socially conscious business professionals with entrepreneurial and management insights.
2. Encourage student's creativity and innovative thinking leading to unique solution for complex problems.
3. Students will learn sound theoretical base and get exposure to current business challenges.
4. Students will develop capabilities and skills in areas of finance, HR and Marketing to take up initial level management roles in industry.
5. Students will be able to take up higher education in the field of Business management.
6. Development of entrepreneurial skills in the student.
7. Development of ethical managers with inter- disciplinary knowledge.

PROGRAMME SPECIFIC OUTCOME

1. Apply ethical principles and commitment towards professional ethics and responsibility.
2. Function effectively as a member, leader, individual or group in diverse environment.
3. Ability to conceptualize a complex issue into a coherent written statement and oral presentation and to communicate effectively on complex activities with technical community.
4. Providing an opportunity for the students to gain practical exposure towards the workplace and make them industry ready.
5. Promotes entrepreneurship by providing understanding of the fundamentals of creating and managing innovation, new business development, and high-growth potential entities.

6. Ability to demonstrate technical competence in domestic and global arena of business through the study of major disciplines within the fields of business.

Course	Course Outcomes (Cos)
BBA 1ST Sem.	
(BBA-101) Business Organization and Systems	CO1: Understanding of basic concepts of commerce, trade and industry. CO2: Learning about modern business practices. CO3: Knowledge about Practices, procedures and functioning of various business organizations.
(BBA-102) Principles of Management	CO1: Familiarity with basic concepts and thoughts of management. CO2: Knowledge about basic functions of management. CO3: Knowledge about different functional activities under managerial functions.
(BC-107) Basics of Business Accounting	CO1: Understand the theoretical and practical framework of accounting. CO2: Familiarity with financial statement preparation. CO3: Understanding corporate financial statement, their analysis and interpretation.
(ECON-106) Managerial Economics	CO1: Understand the concept of economics and their use in business. CO2: Knowledge to apply micro economics concept and techniques in evaluating business decisions making process. CO3: Knowledge of economics and price determination.
(CSE-109) IT Tools in Business	CO1: Acquaint the students with Information Technology tools. CO2: Usage of various office automation tools for individuals and corporate. CO3: Understand to use the packages of word processing, spread sheet and presentation in detail.
BBA 2nd Sem.	
(ENG- 112) Business Communication & Professional Ethics	CO1:Understanding of the concept, process, importance of communication. CO2: Develop effective communication skills- both written and oral. CO3: Acquaint students with application of communication skills in the business world.
(STAT-103) Business Statistics	CO1: Familiarity with various statistical data analysis tools. CO2: There use in effective decision making for business. CO3: Conduct and interpret a variety of hypothesis tests to aid decision making in a business context.
(BC- 108) Basics of Cost Accounting	CO1: Knowledge of Basic cost concepts, element of cost & Preparation of Cost Sheet. CO2: Basic knowledge of important methods and techniques of costing. CO3: Knowledge related to different issues of material valuation etc.
(BBA-103) Business Environment	CO1: Understanding of different concepts of the Indian business environment and the various forms of environments.

	CO2: Understanding of interaction of business and different internal-external forces of environment. CO3: Recognize the mechanism of business and different forces in light of professional ethics and values.
(EDU-101) Human Values and Professional Ethics	CO1: Understand the basic concepts of value, ethics and their importance in professional life.
(BBA-104) Seminar on Contemporary Issues	CO1: Knowledge about contemporary issues in Business management. CO2: Development of presentation skills of students.
BBA 3rd Sem.	
(BC-212) Basics of Management Accounting	CO1: Acquaint students with role of Management Accounting in planning, Control and decision-making. CO2: Preparation of income statements using absorption and variable costing. CO3: Understanding of budgetary control system and financial planning.
(BBA-201) Legal Aspect & Business	CO1: Knowledge of the branches of law related to business. CO2: Knowledge about transactions, certain corporate bodies and related matters and to understand the applications of corporate laws to practical commercial situations. CO3: Knowledge about the provisions of companies act.
(BBA-202) Ethics & Corporate Social Responsibility	CO1: Clarity about the importance of ethics in business and practices of good corporate governance. CO2: Knowledge about the corporate social responsibility, importance and applicability of this concept into business in different ways. CO3: Knowledge about the scope of business ethics in Compliance, finance, Human resources, marketing, and production.
(BBA-203) India's Diversity & Business	CO1: Understanding the bases of India's diversity and its linkages with the people, livelihood, and occupational diversity. CO2: Knowledge of different socio-economic challenges. CO3: Understanding the diversity and its implications for the business.
(BBA-204) International Business	CO1: Overall view of international trade and India's involvement with global business CO2: Elements of trade environment which are relevant to the global business operations and developments. CO3: Implementation of principles of international business and strategies adopted by firms to expand globally.

(BBA-205) Seminar on Contemporary Issues	CO1: Knowledge about contemporary issues in Business management. CO2: Development of presentation skills of students.
BBA 4th Sem.	
(BBA- 206) Financial Management	CO1: Acquaint students with the techniques of financial management. CO2: Their applications for business decision making. CO3: Knowledge of various capital structure theories and factors affecting capital structure.
(BBA- 207) Human Resource Management	CO1: Develop an understanding of the concept & techniques of essential functions of human resource management. CO2: Knowledge of Indian experiences, approaches and cases. CO3: Understand modern HRM strategies to meet the challenges of changing business environment.
(BBA- 208) Marketing Management	CO1: Familiarity with the marketing function in organizations. CO2: Equip the students with understanding of the marketing mix elements and sensitize them to certain emerging issues in Marketing. CO3: Students will expose to analytical skills in identification and resolution of problems pertaining to marketing management.
(BBA- 209) Operations Management	CO1: Understand the concepts of production and operations management. CO2: Usage of techniques of operations management in business. CO3: Knowledge about the elements of operations management and various transformation processes to enhance productivity and competitiveness.
(BBA- 210) Seminar on Contemporary Issues	CO1: Knowledge about contemporary issues in Business management. CO2: Development of presentation skills of students.
(EVS- 301) Environmental Studies	CO1: Understand the concepts of environment and their use in business.
BBA 5th Sem.	
(MATH- 301) Quantitative Techniques for Management	CO1: Acquaint students with the construction of mathematical models for managerial decision making. CO2: Apply these techniques for solving complex management problems. CO3: Demonstrate a professional understanding of the basic mathematical and statistical techniques needed for quantitative analysis.

(CSE- 321) Essentials of E - Commerce	CO1: Understand the basic e-commerce, current and emerging trends. CO2: Familiarity with the mechanism for conducting business transactions through electronic means. CO3: Understand of importance of security, privacy, ethical legal issues of e-commerce.
(BBAF301) Indian Financial system	CO1: Understanding of the role of Indian financial system in economic development. CO2: To learn about Indian financial system and its regulator. CO3: Knowledge of financial services in India.
(BBAHR301) HRD System & Strategies	CO1: Overview of the need for HRD and HRD practices which can develop and improve an organization's systems. CO2: Understanding of components of an optimal HRD climate. CO3: Knowledge related to the strategic issues and strategies related to manpower resources.
(BBAM301) Advertising & Sales Promotion	CO1: Understand the concept, process, importance of advertising and sales promotion. CO2: Understanding the elements of the communication process between buyers and sellers in business. CO3: Utilize marketing research techniques to resolve into competitive marketing decisions.
(BBAF302) Financial Institutions and Markets	CO1: Understanding of different aspects and components of financial Institutions and financial markets. CO2: Enable them to take the rational decision in financial environment. CO3: Understand the challenges of uncertain environment of financial markets, assess them and take appropriate financial and investment decisions.
(BBAHR302) Training & Management Development	CO1: Understand the concept and practice of training and development in the modern organizational setting. CO2: Understand the need and process of training need analysis in organizations. CO3: Understand various training methods and their applicability in different organizational situations.
(BBAM302) Agriculture Marketing	CO1: Understand the concepts of agricultural marketing in a developing country like India. CO2: Understand and appreciate the structure and working of the agricultural marketing system in India. CO3: Learn how agriculture marketing system affects the farmers, consumers and intermediaries.
(BBA- 303) Summer	CO1: To learn the components of preparing and presentation of training report.

Training & Project Report	CO2: Learning of organizational work culture and etiquette. CO3: Development of communication and professional skills.
BBA 6th Sem.	
(BBA -304) Business Policy & Strategy	CO1: Equip students with the necessary insights into designing strategies for an organization. CO2: linking the organizations strategies with the changing environment. CO3: Knowledge of Indian business practices through case studies.
(BBA -305) Women Entrepreneurship Development	CO1: Understand the role of women entrepreneurship in different facets of society. CO2: Know the various livelihood supports for women Employment opportunities. CO3: Elucidate the role of various developmental schemes supporting women entrepreneurship.
(BBAF306) Project Appraisal and Analysis	CO1: Develop skills for designing project proposal for various domains. CO2: Understanding of different techniques of project management and forces i.e. financial, technical, environmental etc. CO3: Skills for project evaluation techniques like PERT,CPM etc.
(BBAHR306) Performance & Compensation Management	CO1: Understand the concepts of performance and compensation CO2: Knowledge about the challenges of attracting, retaining and motivating employees to high performance. CO3: Design rational and contemporary compensation systems in modern organizations.
(BBAM306) Supply Chain Management	CO1: Understand the fundamentals of elements and functions of supply chain, role of drivers and demand forecasting. CO2: To apply various techniques of inventory management and their practical situations. CO3: Analyze how supply chain decisions related to facility location can be applied to various industries and designing the supply chain.
(BBA- 307) Business Research Methods	CO1: To provide an exposure to the students pertaining to the nature and extent of research orientation. CO2: Basic knowledge of advanced understanding of business research design options, methodologies and analysis methods (both qualitative and quantitative). CO3: Broad understanding of issues specific to undertaking business research.
(BBA- 308) Seminar on Contemporary Issues	CO1: Knowledge about contemporary issues in Business management. CO2: Development of presentation skills of students.

Course Programme: M.Sc. Ag. (Agricultural Economics)

PROGRAMME OUTCOMES (POs)	
PO1	To provide in-depth knowledge of macroeconomics, microeconomics, econometrics, production economics, agricultural marketing for agricultural research and policy issues.
PO2	Advance the understanding of the students with economic theory, econometrics, production economics, linear programming and farm management with applications in a wide variety of allied fields
PO3	Develop proficiency in quantitative methods and effective use of these techniques to socio economic and resource utilization problems
PO4	Cultivate rational thinking in the students by the introduction of the conditions of rationality in the areas of consumption, production and distribution
PO5	Production of masters in economics with good national and international level knowledge of higher studies in the field of agricultural economics
PO6	Makes the scholars responsible citizens and professionals which have the capability of critical thinking and independent analysis
PROGRAMME SPECIFIC OUTCOMES (PSOs)	
PSO1	To give in-depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital
PSO2	To upgrade students understanding about the function of agri markets for goods and services and income generation, its distribution and investment
PSO3	To develop understanding of the production systems and allocation of scarce productive resources for optimization of profits under micro and macro conditions.
PSO4	To impart in-depth knowledge into special fields of choice like agricultural economics, basic econometrics, growth and development, agricultural marketing, production economics, environmental economics, agricultural financial institutions and markets.
PSO5	The students after having the understanding of the all the subjects of agricultural economics can easily clear the competitive examinations like NET, SRF, ARS.

Course	Course outcome (COs)
M. Sc Ag. (Agricultural Economics)	
Micro Economic Theory (AG ECON 501)	**CO 1:** Understanding the concepts of demand, elasticities, consumer's surplus producers' surplus, and price determination under different market scenario. **CO 2:** Wage determination under different market structure. **CO 3**: Understanding the market signal affecting consumer and producer behaviour. **CO 4**: Analysing theories of production and cost in short and long run. **CO5**: Understanding the methodologies of market models
Macro Economic Theory (AG ECON 502)	**CO 1:** Knowing the basic economic principles, policies, theories, models, and analytical methods of macroeconomics.

	CO 2: Identification of economic problems and measures to solve them, assessing results, and determining alterative courses of action using various tools. **CO 3**: To understand working of monetary and fiscal policy options related to economic stabilization in the short run and in the long run. **CO 4:** Formulation and assessment of macroeconomic policy initiatives using models.
Agricultural Production Economics (AG ECON 504)	**CO 1:** Knowing the basic economic principles, policies, theories, assumptions, models and analytical methods of production theories. **CO 2:** To understand application of linear, quadratic, Spillman, Cobb Douglas, profit and CES etc production function. **CO 3**: Identification of risk and uncertainties and methods to combat them.
Agricultural Marketing (AG ECON 505)	**CO 1:** Knowing the types and characteristics of markets. **CO 2:** To understand application of demand supply models. **CO 3**: Identification of marketing channels, costs and margins. **CO4**: Role and significance of SWC, CWC, NSC, NAFED, FCI, etc
Mathematical and Statistical Techniques (STAT 501)	**CO 1:** Students will be able to apply the basic mathematical tools & techniques in economic analyses and interpretations. **CO 2:** To make students capable to understand basic mathematics required for understanding economics. **CO 3:** To familiarize students with the use of mathematics as a tool to analyze economic phenomena. **CO4:** Understanding the application of Z, t, F, R^2
Research Methodology for Social Sciences (AG ECON 503)	**CO 1:** Understanding the need and significance of research in social sciences and demonstrating the research process. **CO 2**: Getting acquaintance on various methods of sampling, the data collection techniques through schedules and questionnaires. **CO 3**: Acquiring competence in preparation of schedules, questionnaires and their pre-testing and final preparation. **CO 4**: Understanding the formulations of hypothesis, application of tests for the significance of parameters. **CO 5:** Learning documentation writing and its presentation. **CO 6:** Acquiring capability in preparation of projects for funding from various agencies.
Natural Resource and Environmental Economics (AG ECON 506)	**CO 1:** Extending knowledge about regarding the scarcity of environment resources. **CO 2:** Understanding the inter-linkages of human activities and environment. **CO 3:** Understanding the importance of common property rights in case of public/state resources. **CO 4:** Evaluating cost and optimal level of pollution in the economy. **CO 5:** Regulation of state natural resources through taxes/levies on users. **CO 6:** Detail study of different environmental problems and steps/measure taken to control them. **CO7**: Understanding the application of Hedonic, travel cost and CVM in evaluating the natural resources

Econometrics (AG ECON 507)	**CO 1:** Acquaintance with various statistical & mathematical tools and techniques applied in economics and policy making. **CO 2:** Demonstrating a familiarity with the properties and applications of several families of statistical distributions to econometric problems. **CO 3:** Understanding the application of different models and their usefulness in economics. **CO 4:** Studying the relevant time series and panel data models for economic policy making and future forecasting. **CO 5:** Learning the application of programme packages to do time series and panel data analyses of empirical data.
Operations Research (MATH 501)	**CO1:** Understand the basic concept of operation research and identify and develop operational research models from the verbal description of the real system. **CO2:** Develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transhipment problems. **CO3:** Understand the mathematical tools that are needed to solve optimization problems. **CO4:** Use CPM and PERT techniques, to plan, schedule, and control project activities. **CO5:** Construct the transportation model and analyze the game theory. **CO6:** Use some solution methods for solving the linear optimization problems. **CO7:** Understanding the queuing theory, replacement theory and theory on simulation of management systems.
Project Management and Entrepreneurship Development (MBA 565)	**CO1:** Understanding the scope, cost, timing, and quality of the project, at all times focused on project success. **CO2:** Analyzing the project appraisal techniques with respect to market & demand analysis, situation analysis, collection of information, demand forecasting and market planning. **CO3:** Understanding the technical and financial analysis with respect to a project. **CO4:** Identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements. **CO5:** Understanding the role and responsibilities of the project manager, planning, organizing, controlling, project review and administrative aspect and skills of the project manager.
Computer Applications for Agricultural Economics (CSE 551)	**CO1**: Bridge the fundamental concepts of computers with the present level of knowledge of the students. **CO2**: Create and perform data calculations with Excel spreadsheets and presentations. **CO3:** Make able the students to access the internet, worldwide web, as well as use Internet directories and search engines, and locate www addresses. **CO4:** Make able the students to find and evaluate information on the web (learn how to be critical and evaluate what is valid and reliable). **CO5**: Understanding the application of software's such as SPSS, Excel, Szam, Eviews
Economics of Growth and Development	**CO 1:** Familiarize students with basic concepts of economic development and growth.

(AG ECON 508)	**CO 2:** Understand different strategies and models of economic development. **CO 3:** Understand the applicability of different strategies and models in the growth and development process.
International Economics (AG ECON 509)	**CO 1:** Getting familiarity with the main economic theories and models of international trade. **CO 2:** Application of economic reasoning to issues around the globe. **CO 3**: Recognition of the cause of trade, sources of the gains from trade and the domestic and international distribution of gains. **CO 4:** Analysing consequences of trade policy measures—including tariffs and quantitative restrictions. **CO 5:** Understanding of international economics and the determinants of exchange rates and the balance of payments.
History of Economic Thought (AG ECON 510)	**CO 1:** Views and ideas of economists starting from ancient Greek period to till present. **CO 2:** Methodology to know the measurement of goods and the basis on which they can be exchanged in the market. **CO 3:** Understanding the importance of different factors of production and how they get their rewards. **CO 4:** Knowing the history of materialistic world and its evolution. **CO 5:** Learning the contribution of Nobel Laureates in Economics.
Financial Management (MBA 567)	**CO1:** Understanding the basic concept of financial management. **CO2:** Application of tools of financial management for decision making. **CO3:** Develop analytical skills that would facilitate the financial decision making in capital structure and dividend policy. **CO4:** Estimate working capital requirement of Business concern. **CO5:** Identification of factors affecting the capital structure. **CO6:** Understanding the concept of inventory, cash and receivables management.

Programme: M.Sc. Economics (Two year degree programme)

PROGRAMME OUTCOMES (POs)

PO1: To provide in-depth knowledge of macroeconomics, microeconomics and econometrics for economic research and policy issues

PO2: Advance the understanding of the students with economic theory, econometrics and economic thought with applications in a wide variety of fields within economics

PO3: Develop proficiency in quantitative methods and effective use of these techniques to economic problems

PO4: Cultivate rational thinking in the students by the introduction of the conditions of rationality in the areas of consumption, production and distribution

PO5: Master in economics with good knowledge open up the students for the higher studies in the field of economics atnational and international level

PO6: Makes the scholars responsible citizens and professionals which have the capability of critical thinking and independent analysis

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: To give in-depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital

PSO2: To upgrade students understanding about the function of market for goods and services and income generation, its distribution and investment

PSO3: To develop understanding of the tax structure and its applications in the economy.

PSO4: To impart in-depth knowledge into special fields of choice like agricultural economics, industrial economics, Basic Econometrics, Health Economics, Agricultural Marketing, Labour Economics, Environmental Economics, Financial Institutions and Markets, Contemporary Issues in Indian & World Economy and Globalization&Development

PSO5: The students after having the understanding of the all the subjects of economics can easily clear the competitive examinations related to economics.

Course	Course Outcomes (COs)
M.Sc. ECONOMICS 1st Sem.	
Micro Economic Theory-I ECON 501	**CO 1:** Use the fundamental techniques to identify economic problems and measures to solve them. **CO 2:**Illustrate society's trade-offs by using a production possibilities curve. **CO 3:**Assumption of rationality by individuals and firms. **CO 4:**Introduction to supply and demand and the basic forces that determine equilibrium in a market economy. **CO 5:**Describing the concept of utility. **CO 6:**Analysing theories of production and cost in short and long run.
Macro Economic Theory-I (ECON 502)	**CO 1:** Understanding the behaviour of economy at the macro level and studying the methodology of national income measures. **CO 2:** Apply the principles of macroeconomics in explaining the behaviour of macroeconomic variables in the economy. **CO 3:** Explain classical theory of output and employment. **CO 4:** Understanding the Keynesian theories of income and consumption.
Financial Institutions And Markets (ECON503)	**CO 1:** Explain formal and informal sector, role and function of the financial system. **CO 2:** Describe the current structure and regulation of the Indian financial services sector. **CO 3:**Evaluate and create strategies to promote financial products and services. **CO 4:**Describe financial institutions, types, functions and their regulatory system. **CO 5:**Explain banking services and credit agencies. **CO 6:** Describe the functioning of financial markets and the role of financial institutions within the economic system.
Quantitative Methods (MATH 505)	**CO 1:**Mathematics needed to tackle the various problems of economics. **CO 2:**Applications of differentiation, integration, consumers and producer's optimization problems. **CO 3:** Use of exponential and logarithmic functions to analyze the growth, interest and investment. **CO 4:** Understand and use of the techniques to solve problems in economics, such as profitmaximization and cost minimization.

	CO 5: Able to learn sampling and census methods.
Research Methodology (ECON 599)	**CO 1:** To become familiar with basic knowledge research methodology and sampling techniques. **CO 2:** To understand the suitability of various research approaches and techniques to the investigation of specific research questions. **CO 3:** To be able to access the various methodological foundations of empirical findings. **CO 4:** To have critical awareness of ethical prerequisites of research.
M.Sc. ECONOMICS 2nd Sem.	
Micro Economic Theory –II (ECON 505)	**CO 1:** Describe different market structure determination under different market scenario. **CO 2:**Wage determination under different market structure. **CO 3:**Understanding the market signals affecting consumer and producer behavior. **CO 4:**Understanding concepts of theories of production and cost in short and long run. **CO 5:**Describe the economic welfare, pareto optimality, market failure and govt. failure.
Macro Economic Theory –II (ECON 506)	**CO 1:** Explain the basic economic principles, policies, theories, models, and analytical methods of macroeconomics. **CO 2:** Identification of economic problems and measures to solve, assessing results and determining alternative courses of action by using various tools. **CO 3:** Make understanding of the working of monetary and fiscal policy related to economic stabilization in the short run and long run. **CO 4:** Formulation and assessment of macroeconomic policy initiatives.
International Economics (ECON 507)	**CO 1:** Be familiar with the main economic theories and models of international trade. **CO 2:** Make understanding of trade policy and its analysis. **CO 3:** Have an elementary understanding of open economy macroeconomics and the determinants of exchange rates. **CO 4:**Understand the concepts and utilization of balance of payments. **CO 5:** Be familiar with international monetary system.
Globalization and Development	**CO 1:**Analytical concepts of the globalization and development. **CO 2:**Knowledge about globalization and sustainable development taking into account both global and local perspectives.

(ECON 508)	**CO 3:** Make familiar about the major theories and methods of globalization and development. **CO 4:**Understand the trends and patterns in FDI and TNCs. **CO 5:**Knowing the relationship between intra and inter firm global trade.
Money and Banking (ECON 509)	**CO 1:**Understand the key issues and concepts of monetary policy. **CO 2:**Describe the monetary and fiscal policies and its measures. **CO 3:**Make familiar with the role of money and banks in the economy. **CO 4:**Explain about the classification of the financial system. **CO 5:**Make familiar with the role, function and policy measures of the Reserve Bank of India and financial development banks.
M.Sc. ECONOMICS 3rd Sem.	
Contemporary Issues Of Indian and World Economy (ECON 510)	**CO 1:** Explain various recent issues involved in agricultural, industrial, financial, trade sectors, public institutions and finally human resources development. **CO 2:** Develop a critical understanding of the contemporary issues, problems and potential solutions in the world. **CO 3:**Explain the main problems associated with the recent global economic crisis and its aftermath including poverty, unemployment, inequality, gender disparity. **CO 4:** Describe the existing policy interventions at global, regional and national levels.
Public Finance (ECON 511)	**CO 1:**Describe the functioning of public finance. **CO 2:**Explain the theoretical basis of public expenditures and to analyze their types and economic effects. **CO 3:**Explain the types of public needs and the mechanisms of their financing. **CO 4:**Explain the different types of tax. **CO 5:** Provide knowledge regarding public revenues and expenditures through the budget and to analyze the instruments and objectives of budgetary policy.
Environmental Economics (ECON 512)	**CO 1:** Make familiar with approaches on linkage between natural environment and human Economy. **CO 2:** To make understand the linkages between environmental degradation and economic development. **CO 3:** Make familiar with contemporary environmental problems. **CO 4:** Make familiar with various methods of measurement of environmental resources.

	CO 5: Describe theoretical and applied understanding on diverse frameworks of national and global environmental problems, analytical tools, institutional and regulatory mechanisms.
Agricultural Economics (ECON 513)	**CO 1:** Describe the nature and scope of agricultural economics. **CO 2:** Makes aware about different theories on agricultural development. **CO 3:** Explain the process of agricultural development in the country. **CO 4:** Make familiar with the production functions and economic principles applied to the farm business. **CO 5:** Explain the concept of risk in agricultural marketing.
Industrial Economics (ECON 513)	**CO 1:**Deals with basic concepts of industry. **CO 2:**Discuss about market product and industrial locations. **CO 3:**Explains the market structure & allocation of resources. **CO 4:**Discuss about the industrial marketing, consumer protection and industrial labour.
Basic Econometrics ECON 513	**CO 1:**Explain the economic models. **CO 2:**Application of the tests for mis-specification and parameter restrictions. **CO 3:**To work out solutions for violations of classical assumptions. **CO 4:**Suggest methods for choosing between different models. **CO 5:** Make familiar with the use of different software and interpretations of the results.
Agricultural Marketing ECON 514	**CO 1:**Explain market concepts, marketing of agricultural commodities and intermediaries. **CO 2:**Understand the marketing channels of different commodities. **CO 3:**Provides practical knowledge of price spread and its implications. **CO4:**Explain the role of marketing institutions and trade in agricultural products like WTO and APEDA. **CO5:**Describethe practical knowledge on FCI, CWC and regulated market activities. **CO 6:**Explain the role of CACP for price fixation and price stabilization measures. **CO 7:**Explains role of govt. in regulation of markets and agriculture price policy.

Labour Economics (ECON 514)	**CO 1:**Make aware of different theories on labour and employment. **CO 2:**Analysis of latest development in labour market in developing countries. **CO 3:**Emphasis on wage determination in different markets. **CO 4:**Extending knowledge about industrial relations and working of trade unions. **CO 5:**Understanding the labour policy initiatives.
Health Economics (ECON 514)	**CO 1:**Understanding economic evaluation of health. **CO 2:** Role of insurance policies to minimize the risk, eligibility criteria and procedural formalities. **CO 3:** Development of strategies to minimize the different types of risk. **CO 4:** Understanding mechanism of finance related to health.
Computer Applications for Economics (CSE 541)	**CO 1:**Understanding the concepts of information, languages, CPU, storage devices, etc. **CO 2:**Application of MS office, MS excel, MS power point and soft wares. **CO 3:**Learning operating systems, window operating system, computer network, LAN & WAN. **CO 4:** Understanding application and role of internet services and websites.

ETERNAL UNIVERSITY
BARU SAHIB, DISTT. SIRMOUR (H.P)
DEPARTMENT OF MANAGEMENT (MBA)

Programme: MBA (Two year degree programme)

PROGRAMME OUTCOMES (POs)

PO1: Communicate effectively in a variety of formats.

PO2: Identify the key issues facing a business or business subdivision.

PO3: Utilize qualitative and quantitative methods to investigate and solve critical business problems.

PO4: Integrate tools and concepts from multiple functional areas (i.e. finance, marketing, operations, etc.) to solve business problems.

PO5: Evaluate and integrate ethical, social and environmental responsibilities in business environment.

PO6: Incorporate diversity and multicultural perspectives when making business decision.

PROGRAMME SPECIFIC OUTCOMES (PSOs): MBA- Marketing

PSO1: Prepare students to meet the diverse set of marketing challenges present in today's competitive business environment from understanding the evolving needs of the consumer, to managing sales, to overseeing international marketing and distribution operations.

PSO2: Addressing the specific consumer decision process, internal and external influences on consumer behaviour.

PSO3: Developing a brief knowledge about service marketing, its marketing mix and how peoples importance in service marketing.

PSO4: Development and usage nature and growing importance of sales promotion, samples and point of purchases, implementing and evaluating the sales promotion programs, importance of public relations, corporate image building.

PSO5: Understand the basic concepts in marketing, marketing environment and develop an understanding about communication, marketing Communication and its usage.

PSO6: Understand the various types of advertising, its applications and usage with effect to marketing scenario, role of advertising on the global marketing, usage of advertising campaign and estimation of advertising budget.

PROGRAMME SPECIFIC OUTCOMES (PSOs): MBA- Finance

PSO1: To enables the students to apply the knowledge of accounting standards, financial analytical tools, costing techniques etc.

PSO2: Analyzing the financial performance of an organization applying various tools that aid in decision making.

PSO3: The students will be able to identify the relevance of Financing, Investing & Dividend decisions that impact the growth of the firm.

PSO4: The students are enabled to enhance their knowledge on various financial markets and services provided by the different Financial Institutions.

PSO5: To analyze and understand the various avenues of investment in context of risk and return and to know the financial perspective of risk management at global level in a broader context.

PROGRAMME SPECIFIC OUTCOMES (PSOs): MBA- Human Resource

PSO1: Understand the basic concepts of human resources management and its applications in the individual, group as well as organizational levels.

PSO2: Theoretical knowledge in allied subjects such as organizational behavior, business ethics, communication, quantitative techniques in management, labor, and industrial laws, etc.

PSO3: Practical knowledge and hands-on training in various areas of HR such as recruitment and selection, performance appraisal, management of change, conflict, stress, counseling etc.

PSO4: Practical exposure to the problems and opportunities of Human resources management through the two project studies one theoretical (Organizational study) and the other practical (Problem centered study).

Course	Course Outcomes (COs)
MBA 1st Sem.	
MBA-501 Management Principles & Organizational Behavior	**CO1:** Analyze effective application of management principles to diagnose and solve organizational problems and develop optimal managerial decisions. **CO2:** Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization. **CO3:** Understanding the concept of perception, factors influencing the perception and theories of motivation.
MBA-502 Accounting for Managers	**CO1:** Understand the basic concepts and principles of accounting in business transactions. **CO2:** Understand Double entry system and GAAP principles and record the business transactions in journal, ledger and trail balance. **CO3:** Familiarize with the preparation and analysis of financial statements. **CO4:** Gain insight into the budget and budgetary control measures.
MBA-503 Research Methodology in Business Management	**CO1:** Understanding the concept of research, research applications in functional areas of business and emerging trends in business research. **CO2:** Elaborate the scientific method of research, formulation of research projects, steps in research process and preparation of synopsis. **CO3:** Understanding the qualities of a good hypothesis and concept of hypothesis testing and test of significance. **CO4:** Understanding the data analysis, graphical representation of data and writing of manuscripts.
MBA-504 Business Environment	**CO1:** Understand the basic features of Indian economy and analyze the environment of a business from the legal & regulatory, macroeconomic, cultural, political, technological and natural perspectives. **CO2:** Understand the effects of government policy on the business and outline how an entity operates in a business environment. **CO3:** Analysis of current year annual budget and evaluation of various regulatory policies of government such as industrial policy, fiscal and monetary policy and salient features of FEMA. **CO4:** Conduct an in-depth analysis of a foreign trade, disinvestment and Export- Import policy.
CSE-551 Computer Applications	**CO1:** Learn basic principles of using windows operation system. **CO2:** Be able to find and evaluate information on the web (learn how to be critical and evaluate what is valid and reliable). **CO3:** Learn basic word processing skills with Microsoft Word, such as text input and formatting.
ENG-525 Managerial Communication Skills	**CO1:** Understand the principles of effective communication and barriers of communication.

	CO2: Understanding the process of interviews in - selection or placement interviews, discipline interviews, appraisal interviews and exit interviews. **CO3:** Give managerial speeches such as speech of introduction, speech of thanks, occasional speech, and theme speech and can give presentations and understand the concept of non-verbal communication. **CO4:** Write business letters, routine letters, sales letters and essential of oral presentation.
MBA 2nd Sem.	
ECON-555 Managerial Economics	**CO1:** Understanding the basic concepts of managerial economics. **CO2:** Basic concepts of demand, supply and equilibrium and their determinants and also analyzing the effect of these factors on market. **CO3:** Understanding the basic concept of measuring elasticity and apply the concepts of price, cross and income elasticity, main determinants of elasticity and analyze how elasticity affects revenue. **CO4:** Design competition strategies, including costing, pricing, product differentiation, and market environment according to the natures of products and the structures of the markets.
MBA-505 Business Legislations	**CO1:** Understand the general legal boundaries that define the regulation of business. **CO2:** Recognize the most common forms of business associations, including partnerships, limited liability companies, and corporations. **CO3:** Understanding the benefits of Consumer Protection Act in resolution of consumer queries. **CO4:** Prepare different negotiable instruments like Bills of Exchange, Promissory Note and Cheque and analyze the conditions of dishonor of negotiable instruments and right of the party at loss.
MBA-506 Production and Operations Management	**CO1:** Understand the core features of the operations and production management function at the operational and strategic levels. **CO2:** Understand the process of new product development. **CO3:** Conduct Facility planning by making location and layout decisions. **CO4:** Analyze and evaluate various facility alternatives and their capacity decisions, develop a balanced line of production & scheduling and sequencing techniques in operation environments.
MBA-507 Marketing Management	**CO1:** Students will be able to understand the marketing concepts and its evolution. **CO2:** Analyze the market based on segmentation, targeting and positioning. **CO3:** Knowledge about the consumer behavior and their decision making process. **CO4:** Make decisions on product, price, promotion mix and distribution. **CO5:** Understanding of the rural markets and the contemporary issues in marketing.

MBA -508 Human Resource Management	**CO1:** Understanding of the basic concepts, functions and processes of human resource management and role played by HR Manager. **CO2:** To design and formulate various HRM processes such as recruitment, selection, training and also help to evaluate and design various organizational structures and understand how they are related to organizational success. **CO3:** Development, performance appraisals and reward Systems, compensation Plans and ethical behavior and to be able to form a policy for job analysis. **CO4:** Evaluate the developing role of human resources in the global arena.
MBA-509 Management Information System	**CO1:** Understand the leadership role of management information systems in achieving business competitive advantage through informed decision making. **CO2:** Analyze and synthesize business information and systems to facilitate evaluation of strategic alternatives. **CO3:** Identify managerial challenges and opportunities for organizational advancement that may be resolved by the application of current new technologies. **CO4:** Explain applications as groupware the Internet, executive information systems, telecommunications and other organizational support technologies and relate them to solving organization problems.
MBA 3rd Sem.	
MATH-540 Operation Research	**CO1:** Understand the basic concept of operation research and identify and develop operational research models from the verbal description of the real system. **CO2:** Develop linear programming (LP) models for shortest path, maximum flow, minimal spanning tree, critical path, minimum cost flow, and transshipment problems. **CO3:** Understand the mathematical tools that are needed to solve optimization problems. **CO4:** Use some solution methods for solving the linear optimization problems.
MBA -510 Project Management and Entrepreneurship Development	**CO1:** Understanding the scope, cost, timing, and quality of the project, at all times focused on project success. **CO2:** Align the project to the organization's strategic plans and business justification throughout its lifecycle. **CO3:** Analyzing the project appraisal techniques with respect to market & demand analysis, situation analysis, collection of information, demand forecasting and market planning.

	CO4: Understanding the role and responsibilities of the project manager, planning, organizing, controlling, project review and administrative aspect and skills of the project manager.
MBA -511 Strategic Management	**CO1:** Understanding the importance, scope and concept of strategy and strategic management process and differentiate between tactics, strategies and planning and importance of each component in strategic management. **CO2:** Prepare Vision, Mission statements and define goals, objectives for organization and prepare Value Chain Analysis and identify the areas of concern affecting customer satisfaction **CO3:** Demonstrate the importance of external environmental analysis as well prepare the SWOT Analysis model for decision making. **CO4:** Apply the concepts of BCG matrix and GE9 cell matrix for business portfolio analysis and demonstrate the Porter's 5 forces model for industry environmental analysis.
MBAM-512 Advertisement & Consumer Behavior	**CO1:** Understand different types of advertisement. **CO2:** Identify the key players in advertising industry. **CO3:** Helps to make decisions regarding the most feasible advertising appeal and media. **CO4:** Importance of understanding consumer behavior in marketing.
MBAM-513 Services Marketing	**CO1:** To understand the basic concept of service marketing and role played by marketing manager. **CO2:** Know in detail about the service sector and apply the 7 P's of service marketing. **CO3:** To emphasize the significance of services marketing in the global economy. **CO4:** To make the students understand the deeper aspects of successful services marketing.
MBAM-514 Retail Marketing	**CO1:** Understand the concepts of effective retailing. **CO2:** To provide insights into all functional areas of retailing and to give an account of essential principles of retailing. **CO3:** To give a perspective of the Indian retailing scenario. **CO4:** Know the recent trends in retailing in India. **CO5:** Possess the knowledge of various retail formats and will be understand the retail customer
MBAF-512 Financial Engineering	**CO1:** Understanding the scope and tools used in financial engineering and apply the knowledge of statistics, technology, legal, accounting and taxation in area of financial engineering. **CO2:** Develop an ability to function on inter-professional teams. **CO3:** Develop an ability to identify, formulate, and solve financial engineering problems. **CO4:** Understand the impact of financial engineering and risk management solutions in a global, economic, environmental, and societal context.

MBAF-513 Security Analysis & Portfolio Management	**CO1:** Recognize and apply appropriate theories, principles, and concepts relevant to securities analysis and portfolio management. **CO2:** Value the equities and bonds and understanding the risk and return relationship in terms of the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Theory (APT). **CO3:** Understand basics in derivatives and develop an ability to manage the portfolio among the various financial alternative.
MBAF-514 Financial Management	**CO1:** Understanding the basic concept of financial management. **CO2:** Apply the tools from financial management that will facilitate for the decision making in context of capital budgeting, cost of capital and source of fund. **CO3:** Develop analytical skills that would facilitate the financial decision making in capital structure and dividend policy. **CO4:** Estimate working capital requirement of Business concern.
MBAH-512 Organizational Change and Development	**CO1:** Developing a basic understanding and appreciation for the issues and conditions creating the need for change in modern organizations. **CO2:** Developing an understanding of the strategic role of change in the organization and the impact of change on organizational performance. **CO3:** Developing a basic understanding of how organizations behave and react to change, why change efforts can fail, overcoming organizational resistance, and making change possible. **CO4:** Learning how to apply some of the key concepts and tools organizational development and change leadership and management.
MBAH-513 Compensation Management	**CO1:** Understand the basic concepts of compensation management and design compensation system in an organization. **CO2:** Relate compensation management to behavioral theories and concepts and within the wider context of human resources management**.** **CO3:** Administer the compensation package for special groups and describe the process and evaluate the implications of job evaluation. **CO4:** Identify the internal and external environmental factors that have an impact on the pay structure of an organization.
MBAH-514 Human Resource Planning & Development	**CO1:** Integrated perspective on role of HRM in modern business and ability to plan human resources and implement techniques of job design. **CO2:** Rational design of compensation and salary administration. **CO3**: Competency to recruit, train, and appraise the performance of employees. **CO4:** Ability to handle employee issues and evaluate the new trends in HRM.
MBA 4th Sem.	
MBAM-515 International Marketing	**CO1:** To help the students understand the peculiarities of international marketing and to develop the students' ability to devise marketing mix for international marketing.

	CO2: To make the students understand the concept and techniques of international marketing. **CO3:** Train the students to develop plans and marketing strategies for entering into international markets and managing overseas operations. **CO4:** Analyze about international marketing, its opportunities and promotional policies of the governments to augment trade. **CO5:** Gain in-depth knowledge on Export – procedure & documentation, product planning and policy, Pricing, Distribution, Promotion and Financing.
MBAM-516 Sales management	**CO1:** Helps to explain the basic principles of sales management. **CO2:** Helps to demonstrate an understanding of the role of the sales force as a part of the marketing mix. **CO3:** Helps to apply in a competent manner sales management tools such as sales forecasting, sales compensation methods, sales budgeting, sales reports, routings, quotas, sales analysis, and evaluation of performance by means of a team project that creates a sales force plan. **CO4:** Understanding the role of the function of sales management in the corporate structure.
MBAF-515 International Finance	**CO1.** Understand foreign exchange markets, international financial markets and their functions and needs and describe the international financial environment in context of international fund flows and international financial agencies and how they affect the multinational corporations. **2.** Understand operations in foreign exchange market and demonstrate knowledge of basic theorems of exchange rate determination, interest rates and inflation and the role of arbitrage in keeping the foreign exchange market efficient. **3.** Understand the exchange rate movement, exchange rate equilibrium and factors affecting the foreign exchange rate. **4.** Apply knowledge of foreign exchange hedging to identify and manage the foreign exchange risks faced by multinational corporations.
MBAF-516 Management of Financial Services	**CO1:** Describe the various financial services, its nature and scope and demonstrate an awareness of the current structure and regulation of the Indian financial services sector. **CO2:** Understand the hire purchase, leasing system and describe the factoring, forfeiting and bill discounting and an analysis of depositories act. **CO3:** Understand the credit rating process and methodology adopted by various institutions **CO4:** Understand theoretical frame work and legal frame work in context of venture capital financing.

MBAH-515 Industrial Relations and Labour Legislations	**CO1:** Understanding of rationale behind labor laws. **CO2:** Equip students with important provisions of various labor laws. **CO3:** Insight into the implementation of labor laws. **CO4:** To be able to shape ethical behavior of employees through right policies.
MBAH-516 International HRM	**CO1:** Acquire exposure to the concepts, principles and the changes occurring in the field of HRM at the national and international level. **CO2:** Understand international staffing, performance appraisal and management development. **CO3:** Understand the HR challenges of international business. **CO4:** Importance of cultural sensitivity in an international assignment. **CO5:** Critically appraise the impact of cultural and contextual factors in shaping human resource practices in MNCs.

PROGRAMME: PH.D. COMMERCE

THREE-YEAR (MINIMUM & MAXIMUM OF FIVE YEARS) FULL-TIME PROGRAMME

PROGRAMME OUTCOMES (POs)

PO 1: This degree programme provides opportunity to students to study the application of commerce in depth which someone may wish to apply for building blocks in area of research.

PO 2: Bestow upon students a comprehensive understanding of advanced concepts and modern practices of Commerce and make them industry ready.

PO 3: The students should learn to apply the knowledge of statistics and management to the solution of multifaceted problems.

PO 4: Employ innovative knowledge and imaginative methods including design of research design, analysis, and interpretation of multivariate data, an amalgamation of the information to provide valid conclusions.

PO 5: Create, select, and apply appropriate techniques, resources, and modern software's tools including forecasting and modelling to composite activities to complete the research topic selected.

PO 6: Conceptual building through the application of conceptual commerce foundations to solve practical decision-making problems, both individually and as part of teams using techniques such as case analysis, projects and assignments.

PO 7: An ability to familiarize with ethical issues in educational research, including those issues that arise in using quantitative research and make them employable in reputed higher institutions.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1: The Ph.D. students would gain a thorough understanding of various avenues for conducting research in the field of commerce, management, and economics.

PSO 2: The commerce, management economics, and finance pedagogy offer a number of specializations and practical exposures that would equip the scholars to face the contemporary challenges in the field of commerce, management, and business.

PSO 3: The comprehensive outlook of the course offers value based and job-oriented courses that ensure that students are trained in state-of the-art, technology, commerce and management.

PSO 4: Apply research methodologies while publishing research papers and to develop skills in the application of research methods for business problem solving.

PSO 5: Doctoral research helps in able to understand subjects clearly and communicate effectively making them ideal choice for occupying academic positions.

PSO 6: Gain and up-to-date knowledge on research methods, techniques and SPSS package which is used in analysing data in research.

PSO 7: To get a comprehensive understanding of experimental and analytical techniques, and a thorough knowledge of the literature, applicable to their own research.

Course	Course Outcomes (COs)
	Ph.D. 1st Sem.
Statistical Methods (COM 601)	CO1: Describe and discuss the key terminology, concepts tools and techniques used in business statistical analysis. CO2: Critically evaluate the underlying assumptions of analysis tools. CO3: Understand and critically discuss the issues surrounding sampling and significance. CO4: Discuss critically the uses and limitations of statistical analysis. CO5: Solve a range of problems using the techniques covered
Indian Financial System (COM 602)	CO1: Understand the meaning and scope of financial markets as well as institutions in India. CO2: Understand the concepts of Money Market and Capital Market. CO3: Explain Commercial Banking and its Current developments. CO4: Explain concept of Non-Banking Financial Companies (NBFC‟s) CO5: Examine the Stock Exchange Operations.
Industrial Relation and labour Laws (COM 603)	CO1: Understand evolution of industrial relations and its significance in managerial world. CO2: imbibe how to interact, negotiate and transact with trade unions. CO3: Acquaint with the basic framework of collective bargaining and workers‟ participation. CO4: Design and understand the discipline measures and address grievance mechanisms. CO5: understand the legal structure provided for grievance handling under the Industrial Disputes Act 1947.
Advance Human Resource Management (COM 604)	CO1: Understand basic nature and importance of human resource management. CO2: Analyze the current theory and practice of recruitment and selection. CO3: Realize the importance of performance management system in enhancing employee performance. CO4: Recommend actions based on results of the compensation analysis and design compensation schemes that are cost effective, that increase productivity of the workforce, and comply with the legal framework. CO5: Understand role of modern HRM in meeting challenges of changing business environment.
Security Analysis and Portfolio Management (COM 605)	CO1: Understand the basic structure and working of primary and secondary financial markets in India and conversant with computation of risk and return measures for financial instruments. CO2: Understand secondary market trading CO3: Understand and appreciate the Fundamental and Technical analysis tools for analyzing financial securities. CO4: Well versed with the concept of a Portfolio and understand the principle portfolio theories.

	CO5: Acquaint and understand portfolio analysis, portfolio evaluation and portfolio revision techniques.
Marketing Research (COM 606)	CO1: To enhance the students understanding of the marketing research industry. CO2: To develop skills required by the researcher and understand different applications of Marketing Research. CO3: To explore different approaches of Marketing research. CO4: To be able to exploit Marketing Research data for management decision-making. CO5: To evaluate the corporate public relations and tools and apply a research in the marketing area.
Taxation Policy (COM 607)	CO1: Understand the basic concepts in the law of income tax and determine the residential status of different persons. CO2: Identify the five heads in which income is categorized and compute income under the heads, Salaries‟ and Income from "House Property". CO3: Compute income under the head "Profit sand gains of business or profession ‟Capital gains‟ and Income from other sources. CO4: Understand clubbing provisions, aggregate income after set-off and carry forward of losses, and deductions allowed under the Income Tax Act; and further to compute tax able in come and tax liability of individuals and firms. CO5: Develop the ability to file online returns of income.
Entrepreneurship and Development (COM 608)	CO1: Understand the concept of entrepreneurship in the context of Indian economic scenario. CO2: Link the individual's capability and strength as a guiding factor towards entrepreneurial orientation. CO3: Understand social support system for gaining strength towards entrepreneurial preferences. CO4: Understand entrepreneurial process for initiating new venture creation. CO5: Understand various dimensions of managing a business enterprise once it is formed.
Research Methodology (COM 699)	CO1: To familiarize participants with basic of research and the research process. CO2: To enable the participants in conducting research work and formulating research synopsis and report. CO3: Identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project. CO4: To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the business/Research problem. CO5: To familiarize participants with Statistical packages such as SPSS/Excel.

PROGRAMME: Ph.D. ECONOMICS

PROGRAMME OUTCOMES (POs)

PO 1: This degree programme provides opportunity to students to study the application of economics in depth which someone may wish to apply for building blocks in area of research.

PO 2: To demonstrate a global perspective and awareness on working of an economy. The course will sharpen analytical skills of students through integrating knowledge of economic theory with decision- making techniques. It will demonstrate professionalism, self-awareness, leadership and effective communication skills.

PO 3: Use information and knowledge effectively through scanning, organizing, synthesizing and analysing the data in order to abstract meaning and to share knowledge.

PO 4: An ability to use current techniques, skills and tools necessary for the study of economic aspects.

PO 5: An ability to recognize the importance of professional development by pursuing the doctorate studies or face competitive examinations that offer challenging and rewarding careers in economics.

PO 6: Conceptual building through the application of conceptual economics foundations to solve practical decision-making problems, both individually and as part of teams using techniques such as case analysis, projects and assignments.

PO 7: An ability to demonstrate a critical awareness of current issues in economics which are informed by leading edged research and practice in the field.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1: Understanding the basic and advanced concepts of micro-macroeconomics for different sectors of the economy. Application of laws in the derivation of demand and supply under different market scenarios.

PSO 2: Derivation of tools and techniques helping empirical determination/estimation of demand, supply, output, money supply, inflation, employment, poverty, GDP, BOP and optimum inputs usage. Distribution of resources for maximum welfare and identifying causes of market failure and its consequences.

PSO 3: Understanding the design of the tax structure and application of the concepts of efficiency and equity.

PSO 4: Doctoral research tries to deepen specialization in a particular professional direction.

PSO 5: Doctoral research helps in shaping the future of specialist by individual cognitive activities aimed at obtaining new, knowledge, solving theoretical and practical problems, self-education and self-realization.

PSO 6: Understanding the role of price policy in economic development; the operation mechanism of commodity markets and price discovery.

COURSE	COURSE OUTCOMES (COs)
Ph.D 1st Sem.	
Advanced Micro Economics (ECON 601)	**CO1**: Understanding the modern microeconomic focussing on risk and uncertainty. **CO 2:** Understanding the role of microeconomics in policy formulation in the context of perfect and imperfect markets. **CO3**: Introduction to general and partial equilibrium in the context of production and consumption. **CO4**: Understanding the concepts of welfare economics and application of welfare maximizing criteria. **CO 5**: Application of game theory under competitive strategies& choice making under risk and uncertainty. **CO6**: Determination of factor pricing in the international trade.
Macro Economics (ECON602)	**CO 1**: Understanding the concepts of macroeconomics under static and dynamic scenario. **CO 2**: Comparing and contrast the classical, neo-classical and Keynesian-neo Keynesian perspectives for determination of output and employment. **CO 3**: Description of structure, functions and responsibility of the Central bank's policy and how monetary policy and its tools affect the GDP and interest rates. **CO 4**: Understanding the role and impact of international financial institutions on Indian economy.

Advanced Public Economics (ECON 603)	**CO 1:** Description of major items of government revenue and expenditure and need for government interventions. **CO 2**: Understanding the design of the tax structure using the concepts of efficiency and equity. **CO 3:** Knowing the sources of market failure and potential policy options. **CO 4:** Formulation of public budget. Understanding the principles of stabilisation policy.
Qualitative Development Policy Analysis (ECON 604)	**CO 1:** Description of policy framework in the context of welfare maximization. **CO 2:** Role of quantitative techniques in the failure of markets and rationale for government intervention. **CO 3**: Understanding alternative approaches to demand supply analysis. Measurement of supply response through Nerlovian model. **CO 4**: Conducting market equilibrium analysis in the context of price distortions and transaction costs impacting market efficiency and productivity. **CO 5**: Knowing the concepts and uses of models in social accounting matrices and multipliers.
Agricultural Marketing and Price Analysis (ECON 605)	**CO 1**: Getting deep insight of basic concepts of agricultural marketing viz; market structure, conduct and performance, the factors affecting marketable/ marketed surplus, the market integration, costs & margins, the marketing efficiency, etc. **CO 2:** Understanding the importance and operation of supply chain mechanism, the state trading, warehousing and other agencies. The role of ICT in the marketing of agricultural commodities. **CO 3:** Application of quantitative methods for agricultural policy analysis in the context of price forecasting.

	CO 4: Understanding the role of price policy in economic development; the operation mechanism of commodity markets and price discovery.
Advanced Agricultural Economics (ECON 606)	**CO 1:** Understanding the history of agricultural development. **CO 2:** Understandings the role of agricultural policies including new agricultural policy, 2019 in agricultural development. **CO 3:** Knowing agriculture development in different countries under social, political and economic system. **CO 4:** Learning impact of agricultural development on investment, capital formation & employment. **CO 5:** To understand the impact of institutional changes in agricultural development in India
Research Methodology (ECON 607)	**CO 1:** Understanding the need and significance of research in social sciences. Demonstrating the research process. **CO 2**: Getting acquittance on various methods of sampling, the data collection techniques through schedules and questionnaires. **CO 3**: Acquiring competence in preparation of schedules, questionnaires and their pre-testing and final preparation. **CO 4**: Understanding the formulations of hypothesis, application of tests for the significance of parameters. **CO 5:** Learning documentation writing and its presentation. **CO 6:** Acquiring capability in preparation of projects for funding from various agencies.
Econometrics ECON 608	**CO 1:** Acquaintance with various statistical & mathematical tools and techniques applied in economics and policy making. **CO 2:** Demonstrating a familiarity with the properties and applications of several families of statistical distributions to econometric problems.

	CO 3: Understanding the application of different functions/models and their usefulness in economics. **CO 4:** Studying the relevant time series and panel data models for economic policy making and future forecasting. **CO 5:** Learning the application of programme packages like SAS, RATS, SPSS, TSP, Win BUGS, EViews, etc to do analyses of empirical data.

AKAL COLLEGE OF EDUCATION, ETERNAL UNIVERSITY

Programme Outcomes, Programme Specific Outcomes, Course Outcomes of B.Ed Programme

B.Ed. Programme Outcomes:	To enable B.Ed. Trainees to become ideal and empowered nation builders who engage themselves in teaching-learning process as a mission and sacrifice their lives to save the learner from the clutches of evil and lead towards the light of wisdom through her harmonious development.
Programme Specific Out	• To encourage the pupil teachers to be a global citizen ,serving the human beings at large through the nobler profession of teaching • To persuade the pupil teachers to act as agents of modernization, social change, promote social cohesion, international understanding, and work for protection of human rights and rights of the child. • To enable the pupil teachers to understand the central concepts, tools of inquiry and structures of the disciplines of Education in general, and teacher education in particular. • To make the student teachers understand how children learn and develop, how they differ in their approaches to learning, and create learning opportunities that benefit diverse learners and learning contexts. • To imbibe knowledge, develop an understanding of the various methods and approaches of organizing learning experiences for secondary school students. • To develop the skills of student teachers to plan learning experiences in and outside the classroom that are based on learners' existing proficiency, interests, experiences and knowledge, and enable them to understand how students come to view, develop, learn and make sense of subject matter contained in the curriculum. • To enable them to foster creative thinking among pupils for the reconstruction of knowledge. • To provide student teachers self-identity as a 'teacher' through school based learning experiences and reflective practices that continually evaluate the effects of their choices and actions. • To develop communication skills for education through Information and Communication Technology. • To acquire knowledge and develop an understanding of the various procedures and techniques of evaluation and their classroom applications. • To enable them to undertake Action Research and use innovative practices.

	• To foster in student teachers a desire for life-long learning.
Course : B.Ed.	**OUTCOMES**
EDU-401	To gain an understanding of the aims of education and the inter-relation of education and philosophy and to reflect upon the thoughts of Indian and Western thinkers on education and use it in teaching learning process
EDU-402	To orient students to the field of Child Development, its nature and scope so that they can use its knowledge in school teaching.
EDU-403	To enable B.Ed. Trainees to adopt a positive mindset towards purposeful reading through the use of different reading strategies and to develop right skills for application of vocabulary, grammar, pronunciation and writing.
EDU-404	To enable the trainees to understand the basics of research and develop research mindedness so that trainees can use it in the field of education while dealing with school at large.
EDU-405	To enable the students to appreciate the concept of integration of Information and Communication Technology with Education and use it in teaching learning process while teaching in schools.
EDU-406	To enable the students to understand the pedagogy of the Language and use it in teaching of English language
EDU-407	To enable the students to understand the pedagogy of the Language and use it in teaching of Hindi language
EDU-408	To enable the students to understand the pedagogy of the Language and use it in teaching of Punjabi language
EDU-409	To enable the students to understand the pedagogy of Physical Science and use it in teaching of Physical Science
EDU-410	To enable the students to understand the pedagogy of Life Science and use it in teaching of Life Science
EDU-411	To enable the students to understand the pedagogy of Mathematics and use it in teaching of Mathematics.
EDU-412	To enable the students to understand the pedagogy of Social Science and use it in teaching of Social Science.
EDU-413	To develop sense of organization and an aesthetic sense in B.Ed. Trainees through drama and art in education.
EDU-414	To enable B.Ed. Trainees to understand school plant and behavior of school students through school experience programme in schools.
EDU-415	To enable B.Ed. Trainees to understand the importance of policies & programs during pre & post-independence era and develop vision for future of Indian education.

EDU-416	To create awareness in B.Ed. trainees with respect to the range of cognitive capacities and affective processes in human learners and use them in teaching learning process
EDU-417	To understand the nature of assessment and its role in teaching learning process
EDU-418	To understand the sampling and difference between qualitative and quantitative research to develop research mindedness.
EDU-419	To enable and understand knowledge and types of curriculum and use its knowledge in teaching learning process.
EDU-420	To enhance teaching skills of the students in pedagogy of English language
EDU-421	To enhance teaching skills of the students in pedagogy of Hindi language
EDU-422	To enhance teaching skills of the students in pedagogy of Punjabi language
EDU-423	To enhance teaching skills of the students in pedagogy of Physical Science
EDU-424	To enhance teaching skills of the students in pedagogy of Life Science
EDU-425	To enhance teaching skills of the students in pedagogy of Mathematics
EDU-426	To enhance teaching skills of the students in pedagogy of Social Science
EDU-427	To enable B.Ed. Trainees to reflect through journal on the problems faced by teachers in assessment through the scheme of Continuous and Comprehensive Evaluation in schools
EDU-428 to EDU-434	To enable B.Ed. trainees to get hands on experience in schools for developing teaching skills among themselves
EDU- 435	To develop basic understanding and familiarity with key concepts– gender, gender stereotype, empowerment, gender parity, equity and equality, patriarchy and feminism and use its knowledge in teaching learning process
EDU- 436	To understand inclusive education and use its knowledge in dealing with diverse types of students in schools

EDU- 437	To enable the pupil teachers with the understanding of types of counseling and qualities of an effective counseling and qualities of an effective counselor.
EDU- 438	To enable the pupil teachers to do research in schools/community by the knowledge and understanding of it
EDU- 439	To enable student teachers to discover and develop open-mindedness, the attitude of a self-motivated learner, having self-knowledge and self-restraint.
EDU- 440	To enable student teachers to plan and organize community activities and club activities to address to the societal concerns and curriculum and pedagogic concerns.
EDU- 441	To create awareness and generate interest of student teachers in Environmental Education.
EDU- 442	To develop attitude of students towards developing life skills through education
EDU- 443	To develop an understanding of the system of education, its relationship with school curriculum management in the context of the structures and processes of the education system and its impact on pedagogic processes in the classroom.
EDU- 444	To enable the student teachers to develop an understanding about Health & Physical Education.

Programme Ph.D. (CSE)

Programme Outcomes:

PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences

PO3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

PO5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations

PO6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice

PO7. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

PO8. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes:

PSO1. Model computational problems by applying mathematical concepts and design solutions using suitable data structures and algorithmic techniques.

PSO2. Design and develop solutions by following standard software engineering principles and implement by using suitable programming languages and platforms

PSO3. Develop system solutions involving both hardware and software modules

PSO4. Acquaint with the contemporary trends in industrial/research settings and thereby innovate novel solutions to existing problems

PSO5. Design and develop computer programs/computer-based systems in the areas related to algorithms, networking, web design, cloud computing, IoT and data analytics of varying complexity

PSO6. Demonstrate basic knowledge of computer applications and apply standard practices in software project development.

PSO7. Understand, Analyze and Develop computer programs for efficient design of computer-based systems of varying complexity.

Course	Course Outcomes
CSE610 Advanced Cloud Storage Infrastructure	CO1.Explain the concepts of Cloud Computing CO2. Explain the technology incorporated in Cloud Computing CO3. Explain the architecture of Cloud Computing CO4. Explain the business processes involved in Cloud Computing CO5. Explain the benefits of Cloud Computing through case studies
CSE611 Advanced Cloud Security	CO1. Appraise cloud computing architectures. CO2. Identify the threats, risks, vulnerabilities, side-channel attacks, and privacy issues associated with cloud-based IT services. CO3. Implement safeguards and countermeasures for cloud-based IT services. CO4. Configure cloud services. CO5. Apply security architectures that assure secure isolation of physical and logical infrastructures.
CSE612 Advanced Cloud Architecture	CO1.Understand cloud computing architectural principles, constraints, and best practices; CO2. Design cloud-based solutions using appropriate architectural design principles and best practices to address customer requirements and deliver quality cloud-based solutions; CO3. Design architectures to achieve high availability, scalability (including

	auto scaling), infrastructure automation (infrastructure as software), decoupling, and web-scale storage; CO4. Design architectures based on the main pillars of Cloud Computing: security, reliability, performance efficiency and cost optimization
CSE613 Advanced Mobile and Cloud computing	CO1.To understand the principles and paradigm of Cloud Computing CO2. Ability to design and deploy Cloud Infrastructure CO3.Understand cloud security issues and solutions CO4.To gain knowledge of installing Android Studio and Cross Platform Integrated Development Environment. CO5.An ability to use the techniques, skills, and modern technology.
CSE615 Advanced Cloud Strategy Planning and Management	CO1. Strategically assess how cloud computing enables IT Transformation and business value in an organization. CO2. Analyze the role that cloud computing can play in the business process. CO3. Critically appraise how the incorporation of cloud computing in an IT strategy can deliver on strategic business objectives. CO4. Evaluate how cloud computing and Service Oriented Architecture (SOA) can deliver business agility
CSE617 Design and development of cloud application	CO1.Design and develop elegant and flexible cloud software solutions. CO 2 Evaluate the security issues related to the development of cloud applications. CO 3 Manage and deploy a cloud-based application. CO 4 Research and critique a topic related to Software development in the cloud. CO 5 Analyze a real-world problem and develop a cloud-based software solution
	Option II
CSE221 Applied Cryptography	CO1. Understand the security properties of the cryptographical technologies CO2. Describe the cryptographical technologies CO3. Identify the vulnerabilities of the cryptographical technologies

	CO4. Apply the cryptanalysis skills to evaluate the cryptographical technologies
CSE622 Advanced Intrusion Detection and Prevention System	CO1.Understand modern concepts related to Intrusion Detection System. CO2. Compare alternative tools and approaches for Intrusion Detection through quantitative analysis to determine the best tool or approach to reduce risk from intrusion CO3. Identify and describe the parts of all intrusion detection systems and characterize new and emerging IDS technologies according to the basic capabilities all intrusion detection systems share
CSE623 Advanced Cyber Laws & Security Policies	CO1. Make Learner Conversant with The Social and Intellectual Property Issues Emerging From 'Cyberspace. CO2. Explore the Legal and Policy Developments in Various Countries to Regulate Cyberspace CO 3. Develop the Understanding of Relationship Between Commerce and Cyberspace
CSE624 Advanced Software Vulnerability Analysis	CO1.To learn the tools that can be used to perform information gathering. CO2. To identify operating systems, server applications to widen the attack surface and perform vulnerability assessment activity and exploitation phase. CO3.To learn how vulnerability assessment can be carried out by means of automatic tools or manual investigation. CO4.To learn the web application attacks starting from information gathering to exploitation phases.
CSE625 Advanced Web Security	CO1. describe how sensitive data is vulnerable to hackers CO2. describe the vulnerabilities associated with XXE CO3. describe the importance of an authorization hierarchy for users CO4. explain the importance of appropriate security configuration

CSE603 Advanced Network Security	CO1. Describe network security services and mechanisms. CO2. Symmetrical and Asymmetrical cryptography. CO3. Data integrity, Authentication, Digital Signatures. CO4. Various network security applications, IPSec, Firewall, IDS, Web security, Email security, and Malicious software etc.
	Option III
CSE606 Distributed Operating System	**CO1. To analyze** the current popular distributed systems such as peer-to-peer (P2P) systems will also be analyzed. CO2: To know about Shared Memory Techniques. CO3: Have Sufficient knowledge about file access. CO4: Have knowledge of Synchronization and Deadlock
CSE608 Advanced Software Engineering	CO1. Analyze the software life cycle models. CO2. Identify the importance of the software development process. CO3.Analyze the importance of CASE tools. CO4. Design and develop correct and robust software products using advanced software engineering techniques
CSE631 Advanced Pattern Oriented Software Architecture	CO1. Utilize processes and artifacts to work effectively in a team-oriented development environment CO2. Apply various software architectures, including frameworks and design patterns, when developing software projects CO3. Develop Smalltalk applications CO4. Program distributed applications in a Java environment CO5. Effectively construct medium-sized object-oriented programs
CSE632 Advanced Agile Software Process	CO1. Introduce the concept of development agility and the Agile Manifesto CO2. Review each of the major agile development methods underscoring their strengths and weaknesses CO3. Understand how to manage an agile environment even within a structured organizational approach CO4.Learn how to introduce agility into a development organization

CSE633 Advanced Software Project Management	CO1. Develop the model from the conventional software product to the modern. CO2. Analyze and design the software architecture. CO3. Have an exposure for organizing and managing a software project. CO4. Apply, analyze, design and develop the software project. CO5.Design various estimation levels of cost and effort.
CSE635 Advanced Software Engineering	CO1.Understand the architecture, creating it and moving from one to any, different structural patterns. CO2. Analyze the architecture and build the system from the components. CO3.Design creational and structural patterns. CO4. Learn about behavioral patterns
CSE636 Advanced Software Testing	CO1. List a range of different software testing techniques and strategies and be able to apply specific (automated) unit testing method to the projects. CO2) Distinguish characteristics of structural testing methods. CO3) Demonstrate the integration testing which aims to uncover interaction and compatibility problems as early as possible. CO4) Discuss about the functional and system testing methods.

Program Outcomes, Program Specific Outcomes & Course Outcomes of B.Sc. IT Program

POs of B.Sc. IT Program	
Programme Outcomes	PO-1: To develop the necessary analytical abilities for developing computer-based solutions for real life problems. PO-2: To inculcate quality practices in Information Technology solutions development. PO-3: To imbibe professional skills in students for their future roles. PO-4: To prepare necessary knowledge base for potential research and development in Information Technology. PO-5: To help students' build-up a successful career in Information Technology and allied fields.
PSOs of B.Sc. IT Program	
Programme Specific Outcomes	PSO-1: Communicate effectively with a range of audiences using a range of modalities including written, oral and graphical. PSO-2: Apply the knowledge of engineering and management principles to manage projects effectively in diverse environments as a member or a leader in the team. PSO-3: Engage in independent and life-long learning for continued professional development.

Course	Course Outcomes (Cos)
B.Sc. IT 1ST SEM	
Business Communication Professional Skills (HUM101)	1. To improve the students' accuracy and fluency in English through a well-developed vocabulary, and enable them to listen to English spoken at normal conversational speed by educated English 2. To enable students face competitive exams such as, GRE, TOEFL, IELTS, UPSC and other Bank examinations 3. To enable them communicate their ideas relevantly and coherently in writing 4. Students will also exhibit advanced skills of interview, debating and discussion
Web Design Using HTML (COMP-201)	1. Students will be ready to discover how does web works really, what makes web sites work. 2. Simple and impressive design techniques, from basics till advanced to focus on goal oriented and user centric designs. 3. How to and where to start research, planning for website & actually build excellent web sites.

	4. To create web elements using various tags like buttons, text boxes, checkboxes etc. 5. Forms and validations for your website. 6. Setting up page layout, color schemes, contract in the designs. 7. Writing valid and concise html code for webpages.
Introduction to Computer Applications (COMP-101)	1. Bridge the fundamental concepts of computers with the present level of knowledge of the students. 2. Familiarise operating systems, programming languages, peripheral devices, networking, multimedia and internet. 3. Understand binary, hexadecimal and octal number systems and their arithmetic. 4. Understand how logic circuits and Boolean algebra forms as the basics of digital computer
English Literacy and Typewriting Awareness (ENG-105)	1. Establish correct posture and fingering at the keyboard and to improve keyboard memorisation 2. Develop good proofreading abilities, detect all errors, and acquire a critical attitude towards spelling, punctuation, syllabification, and syntax 3. Students can listen to and understand spoken text well and respond or apply the information appropriately with comments and/or questions. 4. Students should be able to write cohesion and cohesiveness in writing Essays, Letters and other Literature.
Business Organization and Management (BC-103)	1. Understand the concepts related to Business. 2. Demonstrate the roles, skills and functions of management. 3. Analyze effective application of PPM knowledge to diagnose and solve organizational problems and develop optimal managerial decisions using IT Tools. 4. Understand the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities also In IT organizations.
B.Sc. IT 2ND SEM	
Human Values and Professional Ethics (EDU101)	1. Students develop the capability of shaping themselves into outstanding personalities, through a value-based life. 2. Students turn themselves into champions of their lives. 3. Students take things positively, convert everything into happiness and contribute for the happiness of others. 4. Students become potential sources for contributing to the development of the society around them and institutions / organisations they work in. 5. Students shape themselves into valuable professionals, follow professional ethics and are able to solve their ethical dilemmas.

Environmental Studies (EVS301)	1. Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems. 2. Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales. 3. Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes. 4. Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world. 5. Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to conduct high-level work as interdisciplinary scholars and/or practitioners.
Digital Electronics (ETE206)	1. Understand the concepts of various components to design stable analog circuits. 2. Represent numbers and perform arithmetic operations. 3. Minimize the Boolean expression using Boolean algebra anddesign it using logic gates. 4. Analyze and design combinational circuit 5. Design and develop sequential circuits. 6. Translate real world problems into digital logic formulations using VHDL.
Problem Solving & Programming C Language (COMP-121)	1. Illustrate the flowchart and design analgorithm for a given problem and to develop IC programs using operators 2. Develop conditional and iterativestatements to write C programs 3. Exercise user defined functions to solvereal time problems 4. Inscribe C programs that use Pointers toaccess arrays, strings and functions. 5. Exercise user defined data typesincluding structures and unions to solve problems 6. Inscribe C programs using pointers andto allocate memory using dynamic memorymanagement functions. 7. Exercise files concept to show input andoutput of files in C.
Introduction to Information System (CSE107)	1. Analyze web information sources for relevance and accuracy; and synthesize, evaluate and communicate the results, demonstrating writing competencies at the college level. 2. Describe the general characteristics of a computer system and identify types of computer hardware and software and explain their functions. 3. Demonstrate the use of a word processor, spreadsheet, and database application program by completing projects that require students to extend course content to real-world

	situations and manage and organize files and use data storage devices.
B.Sc. IT 3RD SEM	
Computer Graphics (CSE204)	1. To list the basic concepts used in computer graphics. 2. To implement various algorithms to scan, convert the basic geometrical primitives, transformations, Area filling, clipping. 3. To describe the importance of viewing and projections. 4. To define the fundamentals of animation, virtual reality and its related technologies. 5. To understand a typical graphics pipeline 6. To design an application with the principles of virtual reality
Software Engineering (CSE205)	1. Define various software application domains and remember different process model used in software development. 2. Explain needs for software specifications also they can classify different types of software requirements and their gathering techniques. 3. Convert the requirements model into the design model 4. and demonstrate use of software and user-interface design principles. 5. Distinguish among SCM and SQA and can classify different testing strategies and tactics and compare them. 6. Justify role of SDLC in Software Project Development and they can evaluate importance of Software Engineering in PLC.
Operating Systems (CSE211)	1. Describe the important computer system resources and the role of operating system in their management policies and algorithms. 2. Understand the process management policies and scheduling of processes by CPU 3. Evaluate the requirement for process synchronization and coordination handled by operating system. 4. Describe and analyze the memory management and its allocation policies. 5. Identify use and evaluate the storage management policies with respect to different storage management technologies.
Computer Programming in C++ (CSE102)	1. Understand the Object oriented programming fundamentals 2. Develop ability to design algorithms and use functions, strings and pointers 3. Write computer programs to solve practical engineering problems 4. Design efficient computer programs to solve practical engineering problems
B.Sc. IT 4TH SEM	

Emerging Technologies (COMP-321)	1. Identify and analyze various emerging technologies. 2. Identify and analyze various factors that affect business strategy with emerging technologies. 3. Understand the impact of emerging technologies in a global context. 4. Understand the impact of emerging technologies on society as a whole
Core PHP (COMP-221)	1. Write PHP code to produce outcomes and solve problems. 2. Display and insert data using PHP and MySQL. 3. Test, debug, and deploy web pages containing PHP and MySQL.
System Analysis & Design (CSE215)	1. Define and describe the five phases of the system development life cycle. 2. State at least five expected benefits from systems projects. 3. Explain at least three ways in which information systems support business requirements. 4. Describe how systems analysts interact with users, management, and other information systems professionals. 5. Develop data flow diagrams and decision tables.
Workshop on E-Accounting and E-filling of Returns (BC209)	1. Student must become familiar with the mechanism for conducting business transactions through electronic means.
Multimedia Technologies (CSE312)	1. Describe different realisations of multimedia tools and the way in which they are used. 2. Analyse the structure of the tools in the light of low-level constraints imposed by the adoption of various QoS schemes (i.e bottom up approach) 3. Identify and describe the function of the general skill sets in the multimedia industry. 4. Identify the basic components of a multimedia project. 5. Identify the basic hardware and software requirements for multimedia development and playback.
B.Sc. IT 5TH SEM	
Computer Networks (CSE301)	1. Students will be able to implement the terminology and concepts of the OSI reference model and the TCP-IP reference model. 2. To master the concepts of protocols, network interfaces, and design/performance issues in local area networks and wide area networks. 3. To be familiar with wireless networking concepts. 4. To be familiar with contemporary issues in networking technologies. 5. To be familiar with network tools and network programming

Essential of E-Commerce (BC304)	1. Explain various aspects of E-Commerce. 2. Understand the dynamics of fourth channel 3. Appreciate the internet technology and its infrastructure. 4. Understand the methodology for online business dealings using E-Commerce infrastructure
Data Structure (CSE201)	1. Student will be able to choose appropriate data structure as applied to specified problem definition. 2. Student will be able to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures. 3. Students will be able to apply concepts learned in various domains like DBMS, compiler construction etc. 4. Students will be able to use linear and non-linear data structures.
Microprocessors & Its Applications (ETE301)	1. Students will be able to program a microcontroller to perform various tasks. 2. An ability to interface a microcontroller to various devices. 3. An ability to effectively utilize microcontroller peripherals. 4. An ability to design and implement a microcontroller-based embedded system. 5. Introduction to the Architecture and programming of the microprocessor 8085.
Java Programming (CSE304)	1. To gain knowledge of the structure and model of the Java programming language. 2. Students will be able to use the Java programming language for various programming technologies. 3. To develop software in the Java programming language. 4. Students will evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements. 5. To propose the use of certain technologies by implementing them in the Java programming language to solve the given problem.
Visual Basics Programming (CSE318)	1. Demonstrate knowledge of programming terminology and how applied using Visual Basic (e.g., variables, selection statements, repetition statements, etc.) 2. Develop a Graphical User Interface (GUI) based on problem description 3. Develop an Event Planning Chart based on problem description so as to define the processing that is to occur based on specific events 4. Develop an Algorithm to verify processing is accurate 5. Develop programs that retrieve input from a file as opposed to input only provided by user
B.Sc. IT 6TH SEM	

Next Generation Technologies (CSE218)	1. Purpose and implement a network which is capable of handling very high data rate especially multimedia data providing qos and backward compatible with old networks.
Database Management System (CSE213)	1. Master the basic concepts and appreciate the applications of database systems. 2. Master the basics of SQL and construct queries using SQL. 3. Be familiar with a commercial relational database system (Oracle) by writing SQL using the system 4. Be familiar with the relational database theory, and be able to write relational algebra expressions for queries
Cryptography & Internet Security (CSE314)	1. This course builds on the overview about information security, which includes an overview of public and secret key cryptosystems. 2. Students will be able to comprehend and apply authentication services and mechanisms. 3. Students will be able to apply the knowledge and skills obtained to study further concepts in information security
Computer Architecture (CSE214)	1. Students will study basic computer organization, design and micro-operations. 2. Understanding of CPU functioning and computer arithmetic. 3. Learning various methods and techniques of memory organization 4. Ability to design memory organization that uses banks for different word size operations. 5. Ability to understand the concept of I/O organization.
Artificial Intelligence (CSE305)	1. Students will be able to identify problems that are amenable to solution by AI methods, and which AI methods may be suited to solving a given problem. 2. Formalise a given problem in the language/framework of different AI methods (e.g., as a search problem, as a constraint satisfaction problem, as a planning problem, etc). 3. Implement basic AI algorithms (e.g., standard search or constraint propagation algorithms). 4. Design and perform an empirical evaluation of different algorithms on a problem formalization, and state the conclusions that the evaluation supports.

Program Outcomes, Program Specific Outcomes & Course Outcomes of B.Tech. CSE Program

Program Outcomes	POs of B.Tech. CSE Program
1	Adapt the changes in Artificial Intelligence based Data science and use research-based knowledge in the broadest context of technological change.
2	Having Familiarize thinking with good rational management in the field of Computer Engineering and ability to engage in continuous learning in technological areas.
3	Lightening upon predictable needs with proper contemplations such as cost-effectiveness and environmental issues.
4	Recognise the sources of information, design and compile the real time solutions using various software tools.
5	To train the individual in field of Machine Learning, cloud computing with AWS technology, Network Security, Ethical hacking and forensic security aspects.
Program Specific Outcomes	**PSOs of B.Tech. CSE Program**
1	Accepting the professional, technical, security, communal issues and responsibilities related to the computer field.
2	To realise the requirements of the local end users and find the best solution for complex Engineering Problems of the Sirmour area.
3	To produce interrelation and communication among the systems and have sense to equipped with innovative and efficient systems for the upward mobility of society.
4	Ability to work in team and act as an individual in a multidisciplinary environment among constituent colleges.
5	Ability to apply real time solutions in Data Analytics, Artificial Intelligence, Deep learning, Animations, Advanced network security issues and analysis ability to understand the machine behaviour and their characteristics in various domain.

Course	Course Outcomes(Cos)
B.TECH CSE 1ST SEM	
Business Communication Professional Skills (HUM101)	**CO 1:** To improve the students' accuracy and fluency in English through a well-developed vocabulary, and enable them to listen to English spoken at normal conversational speed by educated English **CO 2:**To enable students face competitive exams such as, GRE, TOEFL, IELTS, UPSC and other Bank examinations **CO 3:**To enable them communicate their ideas relevantly and coherently in writing **CO 4:**Students will also exhibit advanced skills of interview, debating and discussion
Problem Solving and Programming (CSE101)	**CO 1:** To develop programs using the basic elements like control statements, Arrays and Strings. **CO 2:** To solve the memory access problems by using pointers

	CO 3: To understand about the dynamic memory allocation using pointers which is essential for utilizing memory **CO 4:** To understand about the code reusability with the help of user defined functions. **CO 5:** To develop advanced applications using enumerated data types, function pointers and nested structures.
Elements of Electronics Engineering (ETE103)	**CO 1:** A remote-based work environment where client interaction, client training, operating systems, and connectivity issues are emphasized. Job titles include remote support technician, help desk technician, call center technician, IT specialist, and representative. **CO 2:** Perform a step by step assembly of a desktop computer tower. **CO 3:** Explain the purpose of preventive maintenance and identify the elements of the troubleshooting process
Engineering Mathematics (EMH111)	**CO 1:** Solve linear differential equations using Laplace transforms **CO 2:** Evaluate multiple integrals and improper integrals **CO 3:** Convert line integrals to area integrals **CO 4:** Convert surface integrals to volume integrals CO5 Determine potential functions for irrotational force fields
Basic Engineering Technologies Lab (EESL103)	**CO 1:** Study and practice on machine tools and their operations **CO 2:** Practice on manufacturing of components using workshop trades including pluming, fitting, carpentry, foundry, house wiring and welding. **CO 3:** Identify and apply suitable tools for different trades of Engineering processes including drilling, material removing, measuring, chiselling.
Engineering Physics (EPH101)	**CO 1:** Solve engineering problems using the concepts of wave and particle nature of radiant energy **CO 2:** Understand the use of lasers as light sources for low and high energy applications **CO 3:**Understand the nature and characterization of acoustic design, nuclear accelerators and new materials **CO 4:** Apply the concepts of light in optical fibers, light wave communication systems, and holography and for sensing physical parameters **CO 4:**Understand theory of relativity and effect of oscillations
Engineering Chemistry (ECH101)	**CO 1:** The knowledge of atomic, molecular and electronic changes, band theory related to conductivity. **CO 2:** The required principles and concepts of electrochemistry, corrosion and in understanding the problem of water and its treatments. **CO 3:** The required skills to get clear concepts on basic spectroscopy and application to medical and other fields. **CO 4:** The knowledge of configurational and conformational analysis of molecules and reaction mechanisms.
Data Communication and Networking (CSE102)	**CO 1:** Understand the rudiments of how computers communicate **CO 2:** Be familiar with the architecture of a number of different networks. **CO 3:** Understand the principles of protocol layering. **CO 4:** Be familiar with modern communication systems. **CO 5:**Understand the basic aspects of packet-based protocol design and implementation
B.TECH CSE 2ND SEM	
Numerical Analysis (EMH112)	**CO 1:** Solve system of linear equations numerically using direct and iterative methods. **CO 2:** Understand how to approximate the functions using interpolating polynomials.

	CO 3: Learn how to solve definite integrals and initial value problems numerically.
Data Structures and Algorithms (CSE103)	**CO 1:**Learn the program independent view of data structures, including their representation and the operations performed on them **CO 2:**Familiar with the utilization of the data structures in problem solving **CO 3:**Learn how to analyze the time and space requirements of a given algorithm
Software Engineering (CSE104)	**CO 1:**Gain understanding of software development life cycle **CO 2:**Prepare SRS document for a software project **CO 3:**Apply software design and development techniques **CO 4:**Apply estimation techniques for software development **CO 5:**Implement testing at each phase of SDLC
Object Oriented Programming (C++) (CSE105)	**CO 1:**Understand the Object oriented programming fundamentals **CO 2:**Develop ability to design algorithms and use functions, strings and pointers **CO 3:**Write computer programs to solve practical engineering problems **CO 4:**Design efficient computer programs to solve practical engineering problems
Human Values and Professional Ethics (EDU101)	**CO 1:** Students develop the capability of shaping themselves into outstanding personalities, through a value-based life. **CO 2:** Students turn themselves into champions of their lives. **CO 3:** Students take things positively, convert everything into happiness and contribute for the happiness of others. **CO 4:** Students become potential sources for contributing to the development of the society around them and institutions / organisations they work in. **CO 5:** Students shape themselves into valuable professionals, follow professional ethics and are able to solve their ethical dilemmas.
Environmental Studies (EVS301)	**CO 1:** Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems. **CO 2:** Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales. **CO 3:** Apply systems concepts and methodologies to analyze and understand interactions between social and environmental processes. **CO 4:** Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world. **CO 5:** Demonstrate proficiency in quantitative methods, qualitative analysis, critical thinking, and written and oral communication needed to conduct high-level work as interdisciplinary **scholars and/or practitioners.**
IT Act & IPR (CSE106)	**CO 1:**The students once they complete their academic projects, shall get an adequate knowledge on patent and copyright for their innovative research works **CO 2:** During their research career, information in patent documents provide useful insight on novelty of their idea from state-of-the art search. This provide further way for developing their idea or innovations
Hardware Lab (CSL107)	**CO 1:** Identify the components of a computer, components in a CPU and its functions. Every student must draw block diagram of the CPU along with the configuration of each peripheral. **CO 2:** Every student should disassemble and assemble the PC back to working condition. **CO 3:** Every student should individually install windows 7 (professional) on the personal computer. He/she must install the device driver's software, and basic application software's viz., adobe reader, Ms-office etc. **CO 4:** Each student must able to configure the basic computer management settings of windows components. Each student must familiar to work with

	MS-DOS command prompt and basic DOS commands. **CO 5:** Every student should install operating systems on the computer.
B.TECH CSE 3RD SEM	
Operating Systems (CSE201)	**CO 1:** To make students able to learn different types of operating systems along with concept of file systems and CPU scheduling algorithms used in operating system. **CO 2:** To provide students' knowledge of memory management and deadlock handling algorithms. **CO 3:** Students will be able to implement various algorithms required for management, scheduling, allocation and communication used in operating system.
Algorithm Analysis &Design (CSE202)	**CO 1:** Students will be able to argue the correctness of algorithms using inductive proofs and invariants. **CO 2:** Analyze worst-case running times of algorithms using asymptotic analysis. **CO 3:** Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. **CO 4:**Apply design principles and concepts to algorithm design
Foundations of Data Science (CSE203)	**CO 1:** Demonstrate understanding of basic mathematical concepts in data science, relating to linear algebra, probability, and calculus. **CO 2:** Employ methods related to these concepts in a variety of data science applications. **CO 3:** Apply logical thinking to problem-solving in context. **CO 4:** Demonstrate skills in writing mathematics.
Database Management Systems (CSE204)	**CO 1:** Master the basic concepts and appreciate the applications of database systems. **CO 2:** Master the basics of SQL and construct queries using SQL. **CO 3:**Be familiar with a commercial relational database system (Oracle) by writing SQL using the system **CO 4:**Be familiar with the relational database theory, and be able to write relational algebra expressions for queries
Engineering Economics and Entrepreneurship (EEE201)	**CO 1:** Understand major principles of economic analysis for entrepreneurship decision making among alternative courses of action in engineering. **CO 2:** Apply economic principles to prices and quantities in competitive supply and demand for goods and find the cost estimation. **CO 3:**Solve economic problems involving comparison and selection of alternatives by using analytical techniques including benefit-cost ratio and breakeven analysis
Computer Graphics & Multimedia (CSE205)	**CO 1:** Provide comprehensive introduction about computer graphics system and design algorithms **CO 2:**Familiar with two dimensional and three dimensional transformations **CO 3:**Familiar with techniques of clipping, hidden surface removal and shading **CO 4:**Provide information about Multimedia and data compression techniques
B.TECH CSE 4TH SEM	
Artificial Intelligence (CSE206)	**CO 1:** Students will be able to identify problems that are amenable to solution by AI methods, and which AI methods may be suited to solving a given problem. **CO 2:** Formalise a given problem in the language/framework of different AI methods (e.g., as a search problem, as a constraint satisfaction problem, as a planning problem, etc). **CO 3:** Implement basic AI algorithms (e.g., standard search or constraint propagation algorithms). **CO 4:** Design and perform an empirical evaluation of different algorithms on a problem formalisation, and state the conclusions that the evaluation supports.

Computer Organization & Architecture (CSE207)	**CO 1:** Understanding Logic gates, flip flops and counter, Clear Understanding of Computer Architecture, Pipeline processing, RISC and CISC architectures, **CO 2:** Develop a base for advance micro-processors.
Data Mining &Warehousing (CSE208)	**CO 1:** Design a data mart or data warehouse for any organization **CO 2:** Extract knowledge using data mining techniques **CO 3:** Adapt to new data mining tools. **CO 4:**Explore recent trends in data mining such as web mining, spatial-temporal mining
Computer Networks (CSE209)	**CO 1:** Students will be able to implement the terminology and concepts of the OSI reference model and the TCP-IP reference model. **CO 2:** To master the concepts of protocols, network interfaces, and design/performance issues in local area networks and wide area networks. **CO 3:** To be familiar with wireless networking concepts. **CO 4:** To be familiar with contemporary issues in networking technologies. **CO 5:**To be familiar with network tools and network programming
Statistical Foundations for Data Science (CSE210)	**CO 1:** Demonstrate understanding of basic mathematical concepts in data science, relating to linear algebra, probability, and calculus. **CO 2:** Employ methods related to these concepts in a variety of data science applications. **CO 3:** Apply logical thinking to problem-solving in context. **CO 4:**Demonstrate skills in writing mathematics
System Software (CSE211)	**CO 1:**Understand the architecture of various machines **CO 2:** Implement of Single Pass and Two Pass Assembler CO 3: Implement of Absolute Loader and Text Editor
B.TECH CSE 5TH SEM	
Web Technologies (CSE301)	**CO 1:** Understanding of Web fundamentals and its working around the world **CO 2:**Understanding and Web Development skills using different flavours of HTML along with CSS technology and interactive validations of different elements using JavaScript/ vbscript **CO 3:** Understanding E-commerce market and being aware of prime security issues while developing applications **CO 4:** Understanding the programming skills using java as Internet programming tool, developing client-server applications, Swings & Events Exception Handling, Servlet and JDBC applications
Discrete Structure (CSE302)	**CO 1:**Be able to construct simple mathematical proofs and possess the ability to verify them **CO 2:**Have substantial experience to comprehend formal logical argument **CO 3:** Be skilful in expressing mathematical properties formally via the formal language of propositional logic and predicate logic
Compiler Design (CSE303)	**CO 1:** Design and implement a prototype compiler. **CO 2:** Apply the various optimization techniques. **CO 3:** Use the different compiler construction tools.
Network Programming (CSE304)	**CO 1:** Learn basics and advanced techniques of socket based client server programming **CO 2:** Identify and apply various socket programming concepts and mechanisms **CO 3:** Gain depth knowledge of sockets and the system calls needed to support network programming **CO 4:** Effectively use the socket interface to develop Client-Server Internet applications
Simulation and Modelling (CSE305)	**CO 1:** Analyze the system and its behaviour so that the physical behaviour of a system can transforms into a mathematical model that can in turn transform into an efficient algorithm for simulation purpose. **CO 2:** Understand the methodology for modelling & simulation of

	continuous, discrete and combined systems using simulation languages **CO 3:** Have basic knowledge on simulation software and use it in solving of engineering problems, analysis and validation of the results **CO 4:** Understand how simulation modelling can aid in effective decision-making.
B.TECH CSE 6TH SEM	
Automata and Formal Languages (CSE307)	**CO 1:** Students will analyse and design finite automata, pushdown automata, Turing machines, formal languages, and grammars. **CO 2:** Students will demonstrate their understanding of key notions, such as algorithm, computability, decidability, and complexity through problem solving. **CO 3:**Students will demonstrate knowledge of basic mathematical models of computation and describe how they relate to formal languages **CO 4:** Students will understand that there are limitations on what computers can do, and learn examples of unsolvable problems. **CO 5:** Students will learn that certain problems do not admit efficient algorithms, and identify such problems.
Software Reliability & Testing (CSE308)	**CO 1:** Understand the concept of reliability and access the difference between H/W & S/W reliability and evaluate different S/W engineering technologies **CO 2:** Understand and anticipate the possible causes of failure and knowledge of how to prevent them and know about various parameter determination methods **CO 3:** Analyze and test a S/W system, when it is evolved to accommodate a set of change requirements such as adding new functionalities, bug fixing etc
Machine Learning (CSE309)	**CO 1:**Understand the concepts of computational intelligence like machine learning **CO 2:**Ability to get the skill to apply machine learning techniques to address the real time problems in different areas **CO 3:** Understand the Neural Networks and its usage in machine learning application.
Java Programming (CSE310)	**CO 1:** To gain knowledge of the structure and model of the Java programming language. **CO 2:** Students will be able to use the Java programming language for various programming technologies. **CO 3:** To develop software in the Java programming language. **CO 4:** Students will evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements. **CO 5:** To propose the use of certain technologies by implementing them in the Java programming language to solve the given problem.
Natural Language Processing (CSE311)	**CO 1:** Understand the approaches to syntax and semantics in Natural Language Processing, the various types of language processors, and the computational morphology **CO 2:** Understand the basic parsing strategies and the approaches to ambiguity resolution **CO 3:** Apply the fundamental algorithms and techniques in the area of Natural Language Processing
Pattern Recognition (CSE312)	**CO 1:** Explain and compare a variety of pattern classification, structural pattern recognition, and pattern classifier combination techniques. **CO 2:** Summarize, analyze, and relate research in the pattern recognition area verbally and in writing. **CO 3:** Apply performance evaluation methods for pattern recognition, and critique comparisons of techniques made in the research literature. **CO 4:** Apply pattern recognition techniques to real-world problems such as document analysis and recognition. **CO 5:** Implement simple pattern classifiers, classifier combinations, and structural pattern recognizers.

Digital Image Processing (CSE313)	**CO 1:** Review the fundamental concepts of a digital image processing system. **CO 2:** Analyze images in the frequency domain using various transforms. **CO 3:** Evaluate the techniques for image enhancement and image restoration. **CO 4:** Categorize various compression techniques.
Cloud Computing (CSE314)	**CO 1:** Understand the fundamental principles of distributed computing. Understand how the distributed computing environments known as Grids can be built from lower level services. **CO 2:** Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing. **CO 3:** Analyze the performance of Cloud Computing.
Distributed Systems (CSE315)	**CO 1:** Students will identify the core concepts of distributed systems: the way in which several machines orchestrate to correctly solve problems in an efficient, reliable and scalable way. **CO 2:**Students will examine how existing systems have applied the concepts of distributed systems in designing large systems, and will additionally apply these concepts to develop sample systems
Linux Programming (CSE316)	**CO 1:** Understanding the basic set of commands and utilities in Linux/UNIX systems. **CO 2:** Students will learn to develop software for Linux/UNIX systems. **CO 3:** To learn the C language and get experience programming in C. **CO 4:** To learn the important Linux/UNIX library functions and system calls. **CO 5:**To understand the inner workings of UNIX-like operating systems
Data or Information Cryptography (CSE317)	**CO 1:** Provide security of the data over the network. **CO 2:** Do research in the emerging areas of cryptography and network security. **CO 3:** Implement various networking protocols. **CO 4:**4. Protect any network from the threats in the world
Security in Computing (CSE318)	**CO 1:** Provide security of the data over the network. **CO 2:** Do research in the emerging areas of cryptography and network security. **CO 3:** Implement various networking protocols. **CO 4:** Protect any network from the threats.
Computer Forensics & Digital Evidence (CSE319)	**CO 1:** Students are able to demonstrate critical thinking by analyzing situations and by constructing and selecting solutions to problems. **CO 2:**able to understand and appreciate the legal and ethical environment impacting individuals as well as business organizations and have an understanding of the ethical implications of IT legal decisions. **CO 3:** able to understand fundamentals and advanced issues of various threats faced by today's cyber infrastructure.
Mobile Communication Systems (CSE320)	**CO 1:**To make students familiar with various generations of mobile communications **CO 2:**To understand the concept of cellular communication **CO 3:** To understand the basics of wireless communication **CO 4:** Knowledge of GSM mobile communication standard, its architecture, logical channels, advantages and limitations.
Semantic Web (CSE321)	**CO 1:**Discuss about basic of semantic web and search engine **CO 2:**Explain RDFS and its process **CO 3:**Explain semantic issue and prototype system **CO 4:**Explain various semantic web services and its design

Neural Networks (CSE322)	**CO 1:**Ability to understand the concepts of Neural Networks **CO 2:**Ability to select the Learning Networks in modeling real world systems **CO 3:**Ability to use an efficient algorithm for Deep Models **CO 4:**Ability to apply optimization strategies for large scale applications
Soft Computing (CSE323)	**CO 1:**To understand the fundamental theory and concepts of N networks, Identify different neural network architectures, algorithms, applications and their limitations **CO 2:**Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications **CO 3:**Reveal different applications of these models to solve engineering and other problem
Information Retrieval (CSE324)	**CO 1:**gain an understanding of the basic concepts and techniques in Information Retrieval; **CO 2:**understand how statistical models of text can be used to solve problems in IR, with a focus on how the vector-space model and language models are implemented and applied to document retrieval problems; **CO 3:**understand how statistical models of text can be used for other IR applications, for example clustering and news aggregation; **CO 4:**appreciate the importance of data structures, such as an index, to allow efficient access to the information in large bodies of text;
Intrusion Detection (CSE325)	**CO 1:** Explain the fundamental concepts of Network Protocol Analysis and demonstrate the skill to capture and analyze network packets. **CO 2:** Use various protocol analyzers and Network Intrusion Detection Systems as security tools to detect network attacks and troubleshoot network problems.
Ad-Hoc & Sensor Networks (CSE326)	**CO 1:**Ability to understand the state-of-the-art research in the emerging subject of Ad Hoc and Wireless Sensor Networks **CO 2:** Ability to solve the issues in real-time application development based on ASN. **CO 3:** Ability to conduct further research in the domain of ASN
B.TECH CSE 7TH SEM	
Intro to Competitive Programming (CSE401)	**CO 1:** describe how algorithmic problems are solved. **CO 2:** recognize the time and memory complexity of an algorithm or a structure. **CO 3:** explain the concrete algorithms and data structures. **CO 4:** analyze the given problem and recognize subproblems. **CO 5:** apply the knowledge on a wider set of problems.
Mobile App Development (CSE402)	**CO 1:** Recognizes the concept of application development for mobile devices. **CO 2:**Recognizes mobile computing platforms and mobile computing **CO 3:**Recognizes smart devices **CO 4:** Recognizes mobile development environments. **CO 5:** Explains the basic concepts of Android phone features and capabilities.
Pega- A Digital Transformation Software Paradigm (CSE403)	**CO 1:** Understand the BPM concepts and workflows. **CO 2:** Providing good knowledge of Pega concepts. **CO 3:** Providing instructions for implementation of Pega concepts. **CO 4:** Instructions to implement the BPM application. **CO 5:** Implement web application with Pega application.
Introduction to Animation & Gaming (CSE404)	**CO 1:** Recognize and evaluate critical and aesthetic issues within computer graphics and the mixed media. (Issues) **CO 2:** Apply aesthetic judgments and critical thinking skills to art and graphics related issues. (Aesthetics)

	CO 3: Demonstrate mastery of specific technical, conceptual and critical abilities within computer graphics and the mixed media. (Abilities) **CO 4:** Demonstrate proficiency with industrial applications to visual communication related technologies.
Cloud Computing with AWS (CSE405)	**CO 1:**Make architectural decisions based on the AWS recommended architectural principles and best practices **CO 2:**Utilise AWS services to make your infrastructure scalable, reliable, and highly available **CO 3:**Make an AWS-based infrastructure more efficient to increase performance and reduce costs **CO 4:**Use the Well-Architected Framework to improve architectures with AWS solutions

Program Outcomes, Program Specific Outcomes & Course Outcomes of M.Tech. CSE Program

Program Outcomes	POs of M.Tech. CSE Program
1	To encourage individuals, design and implement research solutions for day by day changing computing and information system environment in the local areas for adopting innovation.
2	Familiarization upon predictable needs with proper contemplations such as technological, financial and agricultural issues.
3	Ability to comprehend technological changes in field of Image processing, Data analysis, Cloud securities, Software paradigms, Networking, Ethical and Forensic security platforms.
Program Specific Outcomes	**PSOs of M.Tech. CSE Program**
1	Should be able to handle research problem ability and write dissertations.
2	Able to analyse and understand mathematical models, able to learn the necessity of algorithms through literature surveys for fully understanding the proposed architecture of the hardware and software system.
3	Able to implement Agile techniques in various domains and deliver value to their customers faster and with fewer annoyances for new start-up programs.
4	To instil different skills like Computer languages, technologies and managerial skills for the successful entrepreneur and innovative developers.

Course	Course Outcomes(COs)
M.Tech (CSE) 1st Sem.	
Advanced Computer System Architecture (CSE501)	**CO 1:** Understand the Concept of Parallel Processing and its applications. **CO 2:** Implement the Hardware for Arithmetic Operations. **CO 3:** Analyze the performance of different scalar Computers. **CO 4:** Develop the Pipelining Concept for a given set of Instructions.
Programming in Java (CSE502	**CO 1:** Use the syntax and semantics of java programming language and basic concepts of OOP. **CO 2:** Develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages. **CO 3:** Apply the concepts of Multithreading and Exception handling to develop efficient and error free codes **CO 4:** Design event driven GUI and web related applications which mimic the real word scenarios.
Network Security (CSE503)	**CO 1:** Understand security of the data over the network. **CO 2:** Analyze research techniques in the emerging areas of cryptography and network security.

	CO 3: Understand implementation of various networking protocols. **CO 4:** Analyze physical points of vulnerability in simple and complex networks.
Research Methodology (RM599)	**CO 1:** Understand basic concepts of research and its methodologies. **CO 2:** Identify appropriate research topics. **CO 3:** Select and define appropriate research problem and parameters. **CO 4:** Organize and conduct research (advanced project) in a more appropriate manner **CO 5:**Write a research report and thesis **CO 6:** Write a research proposal (grants)
M.Tech (CSE) 2nd Sem.	
Digital Image processing (CSE504)	**CO 1:** Understand the fundamental concepts of a digital image processing system. **CO 2:** Analyze images in the frequency domain using various transforms. **CO 3:** Evaluate the techniques for image enhancement and image restoration. **CO 4:** Categorize various compression techniques. **CO 5:** Interpret Image compression standards. **CO 6**: Interpret image segmentation and representation techniques.
Relational Database Management System (CSE505)	**CO 1:** Understand various data models and database system architectures. **CO 2:** Design a database using normalization theory and explain the concepts of transaction processing. **CO 3:** Implementing queries to access database using SQL.
Distributed Operating System (CSE506)	**CO 1:** Gain knowledge of distributed operating system architecture. **CO 2:** Understand principles and importance of distributed operating system. **CO 3:** Implement distributed client server applications using remote method invocation. **CO 4:** Analyze distinguishing features between centralized systems and distributed systems
Mathematical Foundation for Cyber Security (CSE507)	**CO 1:** Understand basic concepts of various algebraic structures and theorems like Euler's theorem for designing security algorithm. **CO 2:** Understand coding theory which will be useful for data compression, information hiding **CO 3:** Analyze various pseudorandom number generation methods used for designing security protocols.
Advanced Software engineering (CSE508)	**CO 1:** Understand and adhere to professional ethical standards in the system development and modification process, especially by accepting responsibility for the consequences of design decisions and design implementations **CO 2:** Analyze the ability to analyze and implement solutions to complex problems involving computers and networks. **CO 3:** Develop a solid understanding to the methods of modern software engineering. **CO 4:** Develop the ability to build and configure major operating system components

Big Data Analytics (CSE509)	**CO 1:** Develop an ability to apply mathematics and science in engineering applications. **CO 2:** Develop ability to be socially intelligent with good SIQ (Social Intelligence Quotient) and EQ (Emotional Quotient) **CO 3:** Implement good cognitive load management [discriminate and filter the available data] skills. **CO 4:** Understand problem solving ability techniques for solving engineering problems.
M.Tech (CSE) 3rd Sem.	
Cloud Storage Infrastructures (CSE510)	**CO1:** Analyze the components of a virtualized data centre and appraise the role of storage in it. **CO 2:** Implement an information storage strategy for a cloud environment with due consideration for customer and regulatory requirements. **CO 3**: Analyze how best to provide reliable access to information both locally and remotely using storage technologies.
Cloud Security (CSE511)	**CO1:** Articulate the differences between deployment models (public, private, hybrid, and community) versus service models (infrastructure-, platform-, and software-as-a-service) of cloud computing. **CO 2:** Describe cloud security architectures from the perspectives of: providers, brokers, carriers, and auditors. **CO 3**: Understand how cloud computing changes the traditional enterprise security considerations compared to on-premise. **CO 4**: Understand how identity management considerations are different in the cloud, compared to on-premise.
Cloud Architecture (CSE512)	**CO1:** Implement the architecture of the modern data center and the mechanisms of service orchestration. **CO 2:** Understanding how QoS technologies are used to provide "data pipes" between data centers.
Mobile and Cloud Computing (CSE513)	**CO1:**Understand the IoT and Cloud architectures **CO 2:** Deploy Cloud Services using different cloud technologies. **CO 3:** Implement cloud computing elements such virtual machines, web apps, mobile services, etc. **CO 4:** Understand Visualisation techniques to show data generated from the IoT device.
Cloud Strategy Planning & Management (CSE515)	**CO 1:** Understand latest trends in cloud computing. **CO2:** Analyze principles of cloud virtualization, cloud storage, data management and data visualization. **CO 3:** Deploy a cloud based systems. **CO 4:** Develop applications using cloud platforms.
Service Oriented Architecture (CSE516)	**CO1:** Analyze different cloud programming platforms and tools. **CO 2:** Understand the applicability of SOA design patterns and the meaning of the major SOA implementation technologies. **CO 3**: Understand the problematics in service design and analysis

Applied Cryptography (CSE521)	**CO1:** Understand the fundamental knowledge of the cryptographical technologies. **CO 2:** Understand the security properties of the cryptographical technologies. **CO 3:** Implement the cryptanalysis skills to evaluate the cryptographical technologies. **CO 4:** Analyze new cybersecurity problems with solutions.
Intrusion Detection and Prevention System (CSE522)	**CO1:** Understand the fundamental concepts of Network Protocol Analysis and demonstrate the skill to capture and analyze network packets. **CO 2:** Use various protocol analyzers and Network Intrusion Detection Systems as security tools to detect network attacks and troubleshoot network problems. **CO 3:** Analyze intrusion detection alerts and logs to distinguish attack types from false alarms.
Cyber laws & Security Policies (CSE523)	**CO1:** Analyze and Evaluate the cyber security needs of an organization. **CO 2:** Analyze software vulnerabilities and security solutions to reduce the risk of exploitation. **CO 3:** Understand the concepts of risk management process and risk treatment methods. **CO 4:** Design operational and strategic cyber security strategies. **CO 5:** Design security architecture for an organization.
Intellectual Property Rights (CSE524)	**CO1:** Recognize the crucial role of IP in organizations of different industrial sectors for the purposes of product and technology development. **CO 2:** Identify different types of Intellectual Properties (IPs), the right of ownership, scope of protection as well as the ways to create and to extract value from IP. **CO 3:** Be able to anticipate and subject to critical analysis arguments relating to the development and reform of intellectual property right institutions and their likely impact on creativity and innovation.
Software Vulnerability Analysis (CSE525)	**CO1:** Analyze continuous risk management and how to put it into practice to ensure software security. **CO 2:** Implement security properties and link them into the software development lifecycle. **CO 3:** Apply software validation and verification techniques to test security vulnerabilities. **CO 4:** Develop case studies to think like an attacker in order to expose security vulnerabilities in software systems. **CO 5:** Debate and solve security vulnerabilities using software verification and testing techniques.

Web Security (CSE526)	**CO1:** Analyze and resolve security issues in networks and computer systems to secure an IT infrastructure. **CO 2:** Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities and training. **CO 3:** Interpret and forensically investigate security incidents.
Security Threats (CSE527)	**CO 1:** Understand and appreciate the legal and ethical environment impacting individuals as well as business organizations and have an understanding of the ethical implications of IT legal decisions. **CO 2:** Implement basic security tools to enhance system security and can develop basic security enhancements in stand-alone applications.
Pattern Oriented Software Architecture (CSE531)	**CO1:** Understand the architecture, creating it and moving from one to any, different structural patterns. **CO 2:** Analyze the architecture and build the system from the components. **CO 3:** Design creational and structural patterns. **CO 4:** Analyze case study in utilizing architectural structures.
Agile Software Process (CSE532)	**CO1:** Understand the value of enterprise architecture and aligning the IT strategy with the business strategy. **CO 2: Learn** the roles of coarse-grained design, of dealing with costly-to-change decisions and of evolutionary architecture. **CO 3:** Implement sequence work across functional, non-functional and risk aspects. **CO 4:** Analyzing accumulated change which can eventually overwhelm an architecture, requiring a new architecture and a possible rewrite.
Software Project Management (CSE533)	**CO 1:**Learn the different project contexts and suggest an appropriate management strategy. **CO 2:**Implement the role of professional ethics in successful software development. **CO 3:** Undersatnd and describe the key phases of project management. **CO 4:** Implementing an appropriate project management approach through an evaluation of the business context and scope of the project.
Software Quality Management (CSE534)	**CO 1:** Create and apply a software quality assurance plan for all software projects. **CO 2:** Create and manage a software quality assurance team. **CO 3:** Conduct and facilitate inspections, product reviews, walk-throughs, and audits. **CO 4:** Create and maintain appropriate metrics to measure and maintain quality. **CO 5:** Apply a software quality assurance program in an agile environment involving iterative and incremental development.

Stochastic process and Queuing Theory (CSE535)	**CO 1:** Implement model complex systems with uncertainty using random processes, and analyze the system performance **CO 2:** Develop fundamental knowledge of the probability concepts **CO 3:** Acquire skills in analyzing queueing models. **CO 4:** Understand and characterize phenomenon which evolve with respect to time in a probabilistic manner.
Advanced Software Engineering (CSE536)	**CO 1:** Understand and adhere to professional ethical standards in the system development and modification process, especially by accepting responsibility for the consequences of design decisions and design implementations **CO 2:** Analyze the ability to analyze and implement solutions to complex problems involving computers and networks. **CO 3:** Develop a solid understanding to the methods of modern software engineering. **CO 4:** Develop the ability to build and configure major operating system components
Software Testing (CSE537)	**CO 1:** Implementing Various test procesess and continuous quality improvement. **CO 2**: Understanding methods of test generation from requirements. **CO 3:** Analyze application of software testing techniques in commercial environments.
M.Tech (CSE) 4th Sem.	
Design & Development of Cloud Applications (CSE517)	**CO 1:** Understand the meaning of the "Service Oriented" paradigm both from the business and technical point of view. **CO 2**: Analyze requirements towards the creation of a service. **CO 3**: Implement service starting from the analysis phase.
Cyber Crime Investigation and Digital forensics (CSE528)	**CO 1:** Conduct digital investigations that conform to accepted professional standards. **CO 2:** Identification and documentation of potential security breaches of computer data. **CO 3:** Access and critically evaluate relevant technical and legal information and emerging industry trends
Personal Software Process (CSE538)	**CO 1:** Implement Behavior modeling using UML: Finite state machines (FSM). **CO 2:** Input space modeling using combinatorial designs.

	CO 3: Understand Combinatorial test generation. **CO 4:** Understand Test adequacy assessment using: control flow, data flow, and program mutations.

Program Outcomes, Program Specific Outcomes and Course Outcomes

Ph.D. in Public Health

Program Outcomes (POs)

PO1: To develop skills for collecting and interpreting information related to public health

PO 2: Development of analytical and critical skills to address public health challenges in India

PO 3: Polish the communication skills for health advocacy

PO 4: Disseminating and evaluating public health data and information to inform policy making

PO 5: To develop critical acumen for running public health programs in the country

Program Specific Outcome (PSOs)

PSO 1: The students will acquire the necessary skills to work as Epidemiologists, Public Health Consultants, Public Health Administrator, Public Health Researcher, NGO manager at local and national level.

PSO 2: The students will contribute to the process of policy making by disseminating their research findings to policy makers.

PSO 3: Will help the student to enter academics and disseminate the learnings in public health to the community

Course PhD (Public Health)	**Course Outcomes (COs)**
First semester	
Research Methodology (PH-601)	**CO 1**: To provide necessary training in choosing methods, materials and scientific tools relevant for the chosen research problem. **CO 2**: Develop scientific thinking and inductive thinking and development of a critical temperament in research. **CO 3**: To put various research methods into the practice of public health.
Methods in Public Health (PH-602)	**CO 1**: To introduce various approaches to research methodologies in public health. **CO 2**: To introduce familiarity with various research methods used in public health **CO 3**: Choosing a theoretical framework within which various methods are to be placed while designing the study

Social science perspectives of health and illness (PH-603)	**CO 1**: To draw the intersectionalities among disciplines of social sciences and biomedical approach to health **CO 2**: To understand the concept of holistic approach to health and healthcare.
Seminar (PH-604)	**CO 1**: To hone the analytical as well as communication skill of the student **CO 2**: To read and analyse the latest research in area of Public Health
Epidemiology (PH-605)	**CO 1**: To define and delineate various theoretical and conceptual issues in Epidemiology. **CO 2**: To develop understanding of the social epidemiology apart from clinical epidemiology **CO 3**: To develop an epidemiological perspective to public health.
Nutrition and health (PH-606)	**CO 1**: To introduce various determinants which influence the access of food and the study of nutritional status and its linkages with health from a public health perspective. **CO 2**: To focus on the nutrition in women which in turn determines the nutritional status of the child. **CO 3**: To draw inferences from the epidemiology of nutrition in order to suggest or design policy approaches exclusive to nutrition in public health.
Women's Health (PH-607)	**CO 1**: To provide theoretical and conceptual understandings of the gender and how does gender determine health and access to healthcare specifically orienting it to India. **CO 2**: To understand the social inequalities in health from the perspective of **CO 3**: To use the dimension of gender while conducting research or any interventions for improvement of health in population.
Second semester	
Comprehensive examination	**CO 1: To evaluate the learning of the research scholar** **CO 2**: To prepare the scholar for uncertainties in research **CO 3**: to help develop clarity for carrying out research
Synopsis writing	**CO 1:** To finalise the area of research **CO 2**: To pilot the research design **CO 3**: To set an outline for final research
Third, Fourth, Fifth and Sixth semester	
Undertake the research work for thesis	**CO 1:** To visit the field for understanding nuances of research

	CO 2: To apply various methods of analysing the data **CO 3:** To disseminate the research findings

Akal College of Nursing,
Eternal University
Programme: B.Sc. Nursing (Four Year Degree Programme)

PO1 : Utilize critical thinking to synthesize knowledge derived from physical, biological, behavioural sciences, and humanities, in the practice of professional nursing and midwifery

PO2 : Practice professional nursing and midwifery competently and safely in diverse settings, utilizing caring, critical thinking and therapeutic nursing interventions with individuals, families, populations and communities atany developmental Stage and with varied lived health experiences.

PO3 : Provide promotive, preventive and restorative health services in line with national Health policies and programs.

PO4 : Integrate professional caring in to practice decisions that encompass values, ethical, And moral and legal aspect so nursing.

PO5 : Respect the dignity, worth, and uniqueness of self and others.

PO6 : Apply concepts of leadership, autonomy and management to the practice of Nursing and midwifery to enhance quality and safety in healthcare.

PO7 : Utilize the latest knowledge and skills related to information and technology to Enhance patient outcomes.

PO8 : Communicate effectively with patients, peers, and all health care providers.

PO9 : Utilize the requisite knowledge, skills and technologies to practice independently and collaboratively with all health professionals applying the principles of safety and quality improvement.

PO10 : Integrate research findings and nursing theory in decision making in evidence-Based practice.

PO11 : Accept responsibility and accountability for the effectiveness of one'sown nursing and midwifery practice and professional growth as a learner, clinician and leader.

PO12 : Participateintheadvancementoftheprofessiontoimprovehealthcareforthe Betterment of the global society.

Programme Specific Outcome

PSO1 : **Patient centered care:** Provide holistic care recognizing individual patient's preferences, values and needs, that is compassionate, coordinated, age and Culturally appropriate safe and effective care.

PSO2 : **Professionalism:** Demonstrate accountability for the delivery of standard-based nursing care as per the Council standards that is consistent with moral, altruistic, legal, ethical, regulatory and humanistic principles.

PSO3 : **Teaching & Leadership:** Influence the behavior of individuals and groups within their environment and facilitate establishment of shared goals through teaching and leadership

PSO4 : **System-based practice:** Demonstrate awareness and responsiveness to the context of healthcare system and ability to manage resources essential to provide optimal quality of care.

PSO5 : **Health informatics and Technology:** Use technology and synthesize in formation And collaborate to make critical decisions that optimize patient outcomes.

PSO6 : **Communication:** Interact effectively with patients, families and colleagues fostering mutual respect and shared decision making to enhance patient satisfaction and health outcomes.

PSO7 : **Team work and Collaboration:** Function effectively within nursing and Interdisciplinary teams, fostering open communication, mutual respect, shared decision making, team learning and development.

PSO8 : **Safety:** Minimize risk of harm to patients and providers through both system Effectiveness and individual performance.

PSO9 : **Quality improvement:** Use data to monitor the outcomes of care processes and Utilize improvement methods to design and test changes to continuously improve the quality and safety of healthcare system.

PSO10 : **Evidence based practice:** Identify, evaluate and use the best current evidence coupled with clinical expertise and consideration of patient‘s preferences, Experience and values to make practical decisions.

COURSE	Course Outcome (CO)
B.Sc. (N) I YEAR- I SEMESTER	
COMMUNICATIVE ENGLISH **ENGL 101**	**CO 1:** Identify the significance of Communicative English for healthcareprofessionals. **CO 2:** Apply the concepts and principles of English Language use in professional development such as pronunciation, vocabulary, grammar, paraphrasing, voice modulation, Spelling, pause and silence. **CO 3:** Demonstrate attentive listening in different hypothetical situations. **CO 4:** Converse effectively, appropriately and timely within the givencontext and the individual or team they are communicating with eitherface to face or by other means. **CO 5:** Read, interpret and comprehend content in text, flow sheet,framework, figures, tables, reports, anecdotes etc. **CO 6:** Analyse the situation and apply critical thinking strategies.CO 7: Enhance expressions through writing skills. **CO 8:** Apply LSRW (Listening, Speaking, Reading and Writing) Skill incombination to learn, teach, educate and share information, ideas and results.
APPLIED ANATOMY ANAT 105	CO 1: Describe anatomical terms. CO 2: Explain the general and microscopic structure of each system of the body. CO 3: Identify relative positions of the major body organs as well as their general anatomic locations. CO 4: Explore the effect of alterations in structure. CO 5: Apply knowledge of anatomic structures to analyze clinical situations and therapeutic applications.
APPLIED PHYSIOLOGY PHYS 110	CO 1: Develop understanding of the normal functioning of various organ systems of the body. CO 2: Identify the relative contribution of each organ system towards maintenance of homeostasis. CO 3: Describe the effect of alterations in functions. CO 4: Apply knowledge of physiological basis to analyze clinical situations and therapeutic applications.
APPLIED SOCIOLOGY	CO 1: Identify the scope and significance of sociology in nursing. CO 2: Apply the knowledge of social structure and different culture in a

SOCI 115	society in identifying social needs of sick clients. CO 3: Identify the impact of culture on health and illness. CO 4: Develop understanding about types of family, marriage and its legislation. CO 5: Identify different types of caste, class, social change and its influence on health and health practices. CO 6: Develop understanding about social organization and disorganization and social problems in India. CO 7: Integrate the knowledge of clinical sociology and its uses in crisis intervention.
APPLIED PSYCHOLOGY PSYC 120	CO 1: Identify the importance of psychology in individual and professional life. CO 2: Develop understanding of the biological and psychological basis of human behaviour. CO 3: Identify the role of nurse in promoting mental health and dealing with altered personality. CO 4: Perform the role of nurses applicable to the psychology of different age groups. CO 5: Identify the cognitive and affective needs of clients. CO 6: Integrate the principles of motivation and emotion in performing the role of nurse in caring for emotionally sick client. CO 7: Demonstrate basic understanding of psychological assessment and nurse‘s role. CO 8: Apply the knowledge of soft skills in workplace and society. CO 9: Apply the knowledge of self-empowerment in workplace, society and personal life.
NURSING FOUNDATION – I (Theory) N-NF (I) 125	CO 1: Develop understanding about the concept of health, illness and scope of nursing within health care services. CO 2: Apply values, code of ethics and professional conduct in professional life. CO 3: Apply the principles and methods of effective communication in establishing communication links with patients, families and other health team members. CO 4: Develop skill in recording and reporting. CO 5: Demonstrate competency in monitoring and documenting vital signs. CO 6: Describe the fundamental principles and techniques of infectioncontrol and biomedical waste management.

	CO 7: Identify and meet the comfort needs of the patients. CO 8: Perform admission, transfer, and discharge of a patient under supervision applying the knowledge. CO 9: Demonstrate understanding and application of knowledge in caring for patients with restricted mobility. CO 10: Perform first aid measures during emergencies. CO 11: Identify the educational needs of patients and demonstrate basic skills of patient education.
NURSING FOUNDATION -I (Practicum)	CO 1: Maintain effective human relations (projecting professional image) CO 2: Communicate effectively with patient, families and team members CO 3: Demonstrate skills in techniques of recording and reporting CO 4: Demonstrate skill in monitoring vital signs CO5: Care for patients with altered vital signs CO 6: Demonstrate skill in implementing standard precautions and use of PPE CO 7: Demonstrate skill in meeting the comfort needs of the patients CO 8: Provide safe and clean environment CO 9: Demonstrate skill in admission, transfer, and discharge of a patient CO 10: Demonstrate skill in caring for patients with restricted mobility CO 11: Plan and provide appropriate health teaching following the principles CO 12: Acquire skills in assessing and performing First Aid during emergencies.
B.Sc. (N) I YEAR- II SEMESTER	
COURSE	**Course Outcome (Cos)**
APPLIED BIOCHEMISTRY BIOC 135	CO 1: Describe the metabolism of carbohydrates and its alterations. CO 2: Explain the metabolism of lipids and its alterations. CO 3: Explain the metabolism of proteins and amino acids and its alterations. CO 4: Explain clinical enzymology in various disease conditions. CO 5: Explain acid base balance, imbalance and its clinical significance. CO 6: Describe the metabolism of haemoglobin and its clinical significance. CO 7: Explain different function tests and interpret the findings.

	CO 8: Illustrate the immunochemistry.
APPLIED NUTRITION AND DIETETICS NUTR 140	CO 1: Identify the importance of nutrition in health and wellness. CO 2: Apply nutrient and dietary modifications in caring patients. CO 3: Explain the principles and practices of Nutrition and Dietetics. CO 4: Identify nutritional needs of different age groups and plan a balanced diet for them. CO 5: Identify the dietary principles for different diseases. CO 6: Plan therapeutic diet for patients suffering from various disease conditions. CO 7: Prepare meals using different methods and cookery rules.
NURSING FOUNDATION - II (Theory) N-NF (II) 125	CO 1: Develop understanding about fundamentals of health assessment and perform health assessment in supervised clinical settings CO 2: Demonstrate fundamental skills of assessment, planning, implementation and evaluation of nursing care using Nursing process approach in supervised clinical settings CO 3: Assess the Nutritional needs of patients and provide relevant care under supervision CO 4: Identify and meet the hygienic needs of patients CO 5: Identify and meet the elimination needs of patient CO 6: Interpret findings of specimen testing applying the knowledge of normal values CO 7: Promote oxygenation based on identified oxygenation needs of patients under supervision CO 8: Review the concept of fluid, electrolyte balance integrating the knowledge of applied physiology CO 9: Apply the knowledge of the principles, routes, effects of administration of medications in administering medication CO 10: Calculate conversions of drugs and dosages within and between systems of measurements CO 11: Demonstrate knowledge and understanding in caring for patients with altered functioning of sense organs and unconsciousness CO 12: Explain loss, death and grief CO 13: Describe sexual development and sexuality CO 14: Identify stressors and stress adaptation modes CO 15: Integrate the knowledge of culture and cultural differences in meeting the spiritual needs CO 16: Explain the introductory concepts relevant to models of health

	and illness in patient care
NURSING FOUNDATION - II (Practicum)	CO 1: Perform health assessment of each body system CO 2: Develop skills in assessment, planning, implementation and evaluation of nursing care using Nursing process approach CO 3: Identify and meet the Nutritional needs of patients CO 4: Implement basic nursing techniques in meeting hygienic needs of patients CO 5: Plan and Implement care to meet the elimination needs of patient CO 6: Develop skills in instructing and collecting samples for investigation. CO 7: Perform simple lab tests and analyze & interpret common diagnostic values CO 8: Identify patients with impaired oxygenation and demonstrate skill in caring for patients with impaired oxygenation CO 9: Identify and demonstrate skill in caring for patients with fluid, electrolyte and acid – base imbalances CO 10: Assess, plan, implement & evaluate the basic care needs of patients with altered functioning of sense organs and unconsciousness CO 11: Care for terminally ill and dying patients
HEALTH/NURSING INFORMATICS AND TECHNOLOGY HNIT 145	CO 1: Develop a basic understanding of computer application in patient care and nursing practice. CO 2: Apply the knowledge of computer and information technology in patient care and nursing education, practice, administration and research. CO 3: Describe the principles of health informatics and its use in developing efficient healthcare. CO 4: Demonstrate the use of information system in healthcare for patient care and utilization of nursing data. CO 5: Demonstrate the knowledge of using Electronic Health Records (EHR) system in clinical practice. CO 6: Apply the knowledge of interoperability standards in clinical setting. CO 7: Apply the knowledge of information and communication technology in public health promotion. CO 8: Utilize the functionalities of Nursing Information System (NIS) system in nursing. CO 9: Demonstrate the skills of using data in management of health care. CO 10: Apply the knowledge of the principles of digital ethical and legal issues in clinical practice.

	CO 11: Utilize evidence-based practices in informatics and technology for providing quality patient care. CO 12: Update and utilize evidence-based practices in nursing education, administration, and practice.

COURSE OUTCOME III SEMESTER	
COURSE	**COURSE OUTCOME**
APPLIED MICROBIOLOGY	CO1: Explain concepts and principles of microbiology and its importance in nursing. CO2:Describe structure, classification morphology and growth of bacteria CO3:Identify Microorganisms CO4:Describe the different disease producing organisms CO5:Explain the concepts of immunity, hypersensitivity andimmunization
INFECTION CONTROL & SAFETY	CO1:Summarize the evidence based and effective patient care practices for the prevention of common healthcare associated infections in the Healthcare setting CO2:Demonstrate appropriate use of different types of PPEsand the critical use of risk assessment CO3:Demonstrate the hand hygiene practice and itseffectiveness on infection control CO4:Illustrates disinfection and sterilization in the healthcaresetting CO5: Illustrate on what, when, how, why specimens are collected to optimize the diagnosis for treatment and management. CO6:Explain on BioMedical waste management &laundry management CO7:Explain in detail about Antibiotic stewardship, AMR CO8: Describe MRSA/ MDRO and its prevention CO9: Enlist the patient safety indicators followed in a healthcare organization and the role of nurse in the patient safety audit process CO10: Captures and analyzes incidents and events for qualityimprovement CO11: Enumerate IPSG and application of the goals in thepatient care settings CO12:Enumerate the various safety protocols and its applications CO13: Explain importance of employee safety indicators CO14: Identify risk of occupational hazards, prevention andpost exposure prophylaxis.

PHARMACOLOGY-I	CO1:Describe Pharmacodynamics, Pharmacokinetics, CO2:Classification, principles of administration of drugs CO3:Describe antiseptics, and disinfectant & nurse‘s responsibilities CO4: Describe drugs actingon gastro-intestinal system & nurse‘s responsibilities CO5: Describe drugs acting on respiratory system &nurse‘s responsibilities CO6: Describe drugs used oncardio-vascular system& nurse‘s responsibilities CO7: Describe the drugs usedin treatment of endocrine system disorders CO8: Describe drugs used inskin diseases & nurse‘s responsibilities CO9: Explain drug therapy/chemotherapy of specific infections & infestations & nurse‘sresponsibilities
PATHOLOGY-1	Define the common terms used in pathology Identify the deviations from normal to abnormal structure andfunctions of body system Explain pathological changes in disease conditions of varioussystems Describe various laboratory tests in assessment and monitoringof disease conditions
ADULT HEALTH NURSING - I	CO1: Narrate the evolution ofmedical surgical nursing CO2: Apply nursing processin caring for patients with medical surgical problems CO3: Execute the role of a nurse in various medical surgical setting CO4: Develop skills in assessment and care of wound CO5: Develop competency in providing pre and postoperativecare CO6: Explain organizational set up of the operating theatre CO7: Differentiate the role of scrub nurse and circulatingnurse CO8: Describe the different positioning for various surgeries CO9: Apply principles of asepsis in handling thesterile equipment CO10: Demonstrate skill in scrubbing procedures CO11: Demonstrate skill in assessing the patient and document accurately the surgical safety checklist CO12: Develop skill in assisting with selected surgeries CO13: Explain the types, functions, and nursing considerations for different types of anaesthesia

	CO14: Identify the signs and symptoms of shock and electrolyte imbalances CO15: Develop skills in managing fluid and electrolyte imbalances CO16: Perform pain assessment and plans for the nursingmanagement CO17: Demonstrate skill in respiratory assessment CO18: Differentiates different breath sounds and lists the indications CO19: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical, nutritional, and nursing management of common respiratoryproblems CO20: Describe the health behaviour to be adopted inpreventing respiratory illnesses CO21: Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of gastrointestinaldisorders CO22: Demonstrate skill ingastrointestinal assessment CO23: Prepare patient for upper and lower gastrointestinal investigations CO24: Demonstrate skill in gastric decompression, gavage,and stoma care CO25: Demonstrate skill indifferent feeding techniques CO26: Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of cardiovascular disorders CO27: Demonstrate skill incardiovascular assessment Prepare patient for invasive and non- invasive cardiac procedures CO28: Demonstrate skill in monitoring and interpreting clinical signs related to cardiacdisorders CO29: Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of hematological disorders CO30: Interpret blood reports CO31: Prepare and provides health education on blooddonation CO32: Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursingmanagement of endocrine disorders CP33: Demonstrate skill in assessment of endocrine organ dysfunction CO34: Prepare and provides health education on diabeticdiet CO35: Demonstrate skill in insulin administration CO36: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical, nutritional, and nursing management of disorders of integumentary system

	CO37: Demonstrate skill inintegumentary assessment CO38: Demonstrate skill inmedicated bath CO39: Prepare and provide health education on skincare CO40: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical, nutritional, and nursingmanagement of musculoskeletal disorders CO41: Demonstrate skill inmusculoskeletal assessment CO42: Prepare patient for radiological and non- radiological investigations of musculoskeletal system CO43: Demonstrate skill incrutch walking and splinting CO44: Demonstrate skill in care of patient with replacement surgeries CO45: Prepare and providehealth education onbone healing CO46: Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursingmanagement of patientswith communicable diseases CO47: Demonstrate skill inbarrier and reverse barrier techniques CO48: Demonstrate skill in execution of differentisolation protocols
CLINICAL PRACTICUM	CO1: Develop skill in intravenous injection administration andIV therapy CO2: Assist withdiagnostic procedures CO3: Develop skill in the management ofpatients with Respiratory problems CO4: Develop skill in managing patientswith metabolic abnormality CO5: Develop skill in caring for patientsduring pre- and post- operative period CO6: Assist withdiagnostic procedures CO7: Develop skill in managing patient with Gastro-intestinal Problem CO8: Develop skill inwound management CO9: Develop skill in management of patients with cardiac problems CO10: Develop skill in management of patients with disorders of Blood CO11: Develop skill inmanagement ofpatients with disorders of integumentary system CO12: Develop skill inthe managementof patients requiring isolation CO13: Develop skill inmanagement of patients with musculoskeletalproblems CO14: Develop skill incaring for intraoperative patients

COURSE OUTCOME OF IV SEMESTER	
COURSE	**COURSE OUTCOME**

PHAMACOLOGY-II	CO1: Describe drugs used indisorders of ear, nose, throat and eye and nurses‘ responsibilities CO2: Describe drugs actingon urinary system & nurse‘s responsibilities CO3: Describe drugs used on nervous system &nurse‘s responsibilities CO4: Describe drugs used for hormonal disorder & supplementation, contraception & medical termination of pregnancy & nurse‘s responsibilities CO5: Develop understanding about important drugs usedfor women before, during and after labour CO6: Describe drugs used indeaddiction, emergency, poisoning,vitamins & minerals supplementation, drugs used for immunization & immune-suppression & nurse‘s responsibilities CO7: Demonstrate awareness of common drugs used inalternative system of medicine CO8: Demonstrate understanding about fundamentalprinciples of prescribing
PATHOLOGY –II AND GENETICS	CO1: Explain pathologicalchanges in disease conditions of varioussystems CO2: Describe the laboratory tests for examination of body cavity fluids, urine and faeces CO3: Explain nature,principles and perspectives ofheredity CO4: Explain maternal, prenatal and geneticinfluences on development of defects and diseases CO5: Explain the screening methods for genetic defects and diseases inneonates and children CO6: Identify genetic disorders in adolescents and adults CO7: Describe the role ofnurse in genetic services and counselling
ADULT HEALTH NURSING - II	CO1: Explain the etiology, pathophysiology, clinical manifestations,diagnostic measures and medical, surgical, nutritional and nursingmanagement of patients with ENT disorders CO2: Explain the etiology, pathophysiology, clinical manifestations,diagnostic measures and management of patients with disordersof eye CO3: Describe eye donation,banking and transplantation CO4: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical,

	nutritional, and nursingmanagement of Kidneyand urinary system disorders CO5: Demonstrate skill ingenitourinary assessment CO6: Prepare patient forgenitourinary investigations CO7: Prepare and providehealth education onprevention of renal calculi CO8: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical, nutritional, and nursingmanagement of male reproductive disorders CO9: Explain the etiology, pathophysiology, clinical manifestations,types, diagnostic measures and management of patients with disordersof burns/cosmetic surgeries and its significance CO10: Explain the etiology, pathophysiology, clinical manifestations,diagnostic measures and management of patients with neurological disorders CO11: Explain the etiology, pathophysiology, clinical manifestations,diagnostic tests, and medical, surgical, nutritional, and nursingmanagement of immunological disorders CO12: Prepare and provideshealth education on prevention of HIV infection and rehabilitation CO13: Describe the nationalinfection control programs CO14: Explain the etiology, pathophysiology, types, clinical manifestations, staging, diagnostic measures and management of patients with differentcancer, treatment modalities including newer treatments CO15: Explain the types, policies, guidelines, prevention and management of disaster and the etiology, pathophysiology, clinical manifestations,diagnostic measures and management of patients with acute emergencies CO16: Explain the Concept, physiological changes,and psychosocial problems of ageing CO17: Describe the nursingmanagement of the elderly CO18: Explain the etiology, pathophysiology, clinical manifestations,diagnostic measures and management of patients in critical careunits CO19: Describe the etiology, pathophysiology, clinical manifestations,diagnostic measures and management of patients with occupational/ industrial health disorders
CLINICAL PRACTICUM	CO1: Provide careto patients with ENT disorders CO2: Educate the patients and their families CO3: Develop skillin providing care to patients with Eye disorders

	CO4: Educate thepatients and their families CO5: Develop skillin Managementof patients with urinary, male reproductive problems CO6: Develop skill in burnsassessment and providing care to patients with differenttypes of burns CO7: Develop skill in providing care to patients with different types of cosmetic and reconstructive surgeries CO8: Develop skillin Managementof patients with Neurologicalproblems CO9: Develop skill inthe Management ofpatients with immunological disorders CO10: Develop skillin providing care to patients with oncological disorders CO11:Develop skillin providing care to patients with emergency health problems CO12:Develops skill in geriatric assessment and providing care topatients with geriatric illness CO13:Develop skill in assessment of critically illand providingcare to patients with critical health conditions
PROFESSIONALISM, PROFESSIONAL VALUES & ETHICS INCLUDING BIOETHICS	CO1: Discuss nursing as aprofession CO2: Describe the conceptsand attributes of professionalism CO3: Identify the challengesof professionalism CO4: Maintain respectful communication and relationship with otherhealth team members, patients and society CO5: Demonstrate professional conduct CO6: Respect and maintainprofessional boundaries between patients, colleagues and society CO7: Describe the roles andresponsibilities of regulatory bodies and professional organizations CO8: Discuss the importance of professional values CO9: Distinguish betweenpersonal values and professional values CO10: Demonstrate appropriate professional values innursing practice CO11: Define ethics &bioethics CO12: Explain ethicalprinciples CO13: Identify ethicalconcerns CO14: Ethical issues and dilemmas in healthcare CO15: Explain process of ethical decision making and apply knowledge of ethicsand bioethics in making ethical decisions CO16: Explain code of ethicsstipulated by ICN andINC CO17: Discuss the rights of the patients and families to make decisions about healthcare

	CO18: Protect and respectpatients‘ rights

B. Sc. Nursing 3rd Year Semester V & VI	
Course	**Course Outcome (COS)**
Child Health Nursing-I	**CO 1:** Explain themodern concept of child care & principles of child health Nursing **CO 2:** Describe national policy programs and legislationin relationto child health andwelfare **CO 3:** Describe role of preventive pediatrics **CO 4:** List major causes of death during infancy, early & late childhood **CO 5:** Differentiate betweenan adult and child in terms of illness and response **CO 6:** Describe the major functions and role of the pediatric nurse in caring for ahospitalized child. **CO 7:** Describe the principles of child health nursing and perform child health nursing procedures **CO 8 :**Describe the normal growth and development of children at differentages **CO 9:** Identify the needs of children at different ages & provide parental guidance **CO 10:** Identify the nutritional needs of children at different ages & ways of meeting needs **CO 11:** Identify the role of playfor normal & sick children **CO 12:** Provide care to normaland high- risk neonates **CO 13:** Perform neonatalresuscitation **CO 14:** Recognize and managecommon neonatal problems **CO 15:** Apply principles andstrategies of IMNCI **CO 16:** Describe the etiology, pathophysiology, clinical manifestation and nursing management of children with disorders of respiratory, and endocrine system **CO 17:** Develop ability to meetchild- hood emergencies and perform child CPR
Child Health Nursing-Practical	**CO 1:** Provide nursingcare to childrenwith various medical disorders **CO 2:** Recognizedifferent pediatric surgical conditions / malformations

	CO 3: Provide pre andpost operative care to childrenwith common pediatric surgical conditions / malformation **CO 4:** Counsel and educate parents **CO5:** Perform assessment of children - Health, Developmental and Anthropometric **CO 6:** Perform immunization **CO 7:** Give HealthEducation / Nutritional Education **CO 8:** Provide nursingcare to criticallyill children
Child Health Nursing-Internship	CO 1: Provide comprehensive care tochildren with medical conditions CO 2: Provide comprehensive care tochildren with surgical conditions CO 3: Provide intensive care toneonates
Mental Health Nursing	**CO 1:** Describe the historical development & current trends in mental health nursing **CO 2:** Discuss the scope of mental health nursing **CO 3:** Describe the conceptof normal & abnormal behavior **CO 4:** Discuss the scope of mental health nursing **CO 5:** Describe the concept of normal& abnormalbehavior **CO 6:** Define thevarious terms usedin mental health nursing **CO 7:** Explain theclassification of mentaldisorders **CO 8:** Explain psycho dynamics of maladaptive behavior **CO 9:** Discuss the etiological factors, psychopathology of mental disorders **CO 10:** Explain the Principles & standards of mental health nursing **CO 11:** Describe the conceptual models of mental health nursing **CO 12:** Describe nature, purpose & process of assessmentof mental health **CO 13:** Identify therapeuticcommunication techniques **CO 14:** Describe therapeutic relationship **CO 15:** Describe therapeutic impasse and its intervention **CO 16:** Explain treatment modalities & therapiesused in mental disorders and role of the nurse **CO 17:** Describe the etiology, psychopathology, clinical manifestations, diagnostic criteria & management of patients with Schizophrenia and other psychotic disorders

	CO 18: Describe the etiologypsycho- pathology, clinical manifestations, diagnostic criteria andmanagement of patients with mood disorders **CO 19:** Describe the etiology, psycho-pathology, clinical manifestations, diagnostic criteria andmanagement of patients with neurotic, stress related andSomatizationn disorders **CO 20:** Describe the etiologypsycho-pathology, clinical manifestations, diagnostic criteria andmanagement of patients with substance use disorders
Mental Health Nursing-Practical	**CO 1:** Assess patients with mental health problems **CO 2:** Observe &assist in therapies **CO 3:** Counsel & educate patient,& families **CO 4:** Assess of children with various mental health problems **CO 5:** Counsel and educate children, families & significant others **CO 6:** Assess patients with mental health problems **CO 7:** Provide nursing care forpatients with various mental health problems **CO 8:** Assist invarious therapies **CO 9:** Counsel &educate patients, families &significantothers **CO 10:** Identify patients with various mentaldisorders **CO 11:** Motivate patients for early treatment& follow up **CO 12:** Assist in follow up clinic

	CO 13: Counsel and educate patient,family and community **CO 14:** Observe the assessment and care of patients at deaddiction centre
Mental Health Nursing-Internship	**CO 1:** Provide comprehensive care to the patient with mental health problems.
Nursing Research and Statistics	**CO 1:** Describe the conceptof research,terms, needand areas of research in Nursing **CO 2:** Explain thesteps of research process **CO 3:** Identify and state the research problem and objectives **CO 4:** Review of the literature **CO 5:** Describe the research approaches & designs **CO 6:** Explain the sampling process **CO 7:** Describe the methods ofdata collection **CO 8:** Analyze, interpret and summarizethe research data **CO 9:** Explain theuse of statistics, scales of measurement and graphical presentation of data **CO 10:** Describe the measures of central tendency and variability and methods ofcorrelation. **CO 11:** Communicate and utilize the research findings
Community Health Nursing - I	**CO 1:** Define public health, community health andcommunity health nursing **CO 2:** Explain the evolutionof public health in India and scope of community health nursing **CO 3:** Explain various concepts of health anddisease, dimensions and determinants of health **CO 4:** Explain the natural history of disease andlevels of prevention **CO 5:** Discuss the health problem of India **CO 6:** Describe health planning and its steps,and various health plans, and committees **CO 7:** Discuss health care delivery system in India at various levels **CO 8:** Describe SDGs, primary health careand comprehensive

	primary health care(CPHC) **CO 9:** Explain health carepolicies and regulations in India **CO 10:** Identify the role of anindividual in the conservation of naturalresources **CO 11:** Describe ecosystem, its structure, types andfunctions **CO 12:** Explain the classification, valueand threats to biodiversity **CO 13:** Enumerate the causes,effects and control measures of environmental pollution **CO 14:** Discuss about climatechange, global warming, acid rain, and ozone layer depletion **CO 15:** Enumerate the role of an individual in creating awareness about the social issuesrelated to environment **CO 16:** List the Acts related toenvironmental protection and preservation **CO 17:** Describe the conceptof environmental health and sanitation **CO 18:** water conservation, rain water harvesting andwater shed management **CO 19:** Describe the variousnutrition assessmentmethods at the community level **CO 20:** Plan and provide dietplans for all age groups including therapeutic diet **CO 21:** Provide nutrition counseling and education to all agegroups and describe the national nutritionprograms **CO 22:** Identify early the foodborne diseases, and perform initial management and referral appropriately **CO 23:** Describe behavior change communication skills **CO 24:** Counsel and providehealth education to individuals, families and community for promotion of healthylife style practices using appropriate methods and media **CO 25:** Describe communityhealth nursing approaches and concepts **CO 26:** Describe and identifythe activities of community health nurse to promote andmaintain family health through home visits **CO 27:** Explain the specificactivities of community health nurse in assisting individuals and groups to promote and maintain their health **CO 28:** Provide primary care at home/ health centers(HWC) using standingorders/ protocols as per public health standards/approved by MoH&FW and INC regulation **CO 29:** Develop skill in maintenance of records and reports

	CO 30: Develop beginning skills in handling social issues affecting the health and development of the family **CO 31:** Identify and assist thefamilies to utilize the community resourcesappropriately **CO 32:** Describe the concepts,approaches and methods of epidemiology **CO 33:** Investigate an epidemic of communicable disease **CO 34:** Explain the epidemiology of specific communicablediseases **CO 35:** Describe the various methods of prevention,control and management of communicable diseases and the role of nurses in screening, diagnosing, primary management and referral to a health facility **CO 36:** Identify the nationalhealth programs relevant to communicable diseases and explainthe role of nurses in implementation of these programs **CO 37:** Describe the national health program for thecontrol of non-communicable diseases and the role of nurses in screening, identification, primarymanagement and referral to a health facility **CO 38:** Enumerate the schoolhealth activities and the role functions of aschool health nurse
Clinical Practicum	**CO 1:** Build and maintain rapport **CO 2:** Identify the socio- demographic characteristics, health determinants and resources of a rural andan urban community **CO 3:** Observe the functioningand document significant observations **CO 4:** Perform nutritional assessment and plandiet plan for adult **CO 5:** Educate individuals/ family/community on **a.** Nutrition **b.** Hygiene **c.** Food hygiene **d.** Healthy lifestyle **e.** Health promotion **CO 6:** Perform health assessment for clientsof various age groups **CO 7:** Maintain records andreports **CO 8:** Investigate epidemic ofcommunicable disease **CO 9:** Identify prevalent communicable and non-communicable diseases **CO 10:** Screen, diagnose, manage and refer clients with common health problems in thecommunity and refer high risk clients using standing orders/protocols **CO 11:** Participate in implementation ofnational health programs

	CO 12: Participate in schoolhealth program
Educational Technology/ Nursing Education	**CO 1:** Explain the definition,aims, types, approaches and scope of educational technology **CO 2:** Compare and contrastthe various educational philosophies **CO 3:** Explain the teaching learning process, nature, characteristics and principles **CO 4:** Identify essential qualities/attributes of ateacher **CO 5:** Describe the teachingstyles of faculty **CO 6:** The determinants of learning and initiatesself-assessment to identify own learningstyle **CO 7:** Identify the factorsthat motivate the learner **CO 8:** Define curriculum andclassify types **CO 9:** Identify the factors influencing curriculumdevelopment **CO 10:** Develop skill in writing learning outcomes, and lessonplan **CO 11:** Explain the principlesand strategies of classroom management **CO 12:** Describe different methods/strategies of teaching and develop beginning skill in using various teachingmethods **CO 13:** Explain active learning strategies andparticipate actively in team and collaborativelearning **CO 14:** Enumerate the factorsinfluencing selection of clinical learningexperiences **CO 15:** Develop skill in usingdifferent clinical teaching strategies **CO 16:** Explain the purpose, principles and steps inthe use of media **CO 17:** Categorize the different types of media and describe its advantages and disadvantages **CO 18:** Develop skill in preparing and usingmedia **CO 19:** Describe the purpose, scope, principles in selection of evaluationmethods and barriers to evaluation **CO 20:** Explain the guidelinesto develop assessment test **CO 21:** Develop skill inconstruction of different tests **CO 22:** Identify various clinicalevaluation tools and demonstrate skill in selected tests **CO 23:** Explain the scope, purpose and principlesof guidance

	CO 24: Differentiate betweenguidance and counseling **CO 25:** Describe the principles, types, andcounseling process **CO 26:** Basic skill ofcounseling and guidance **CO 27:** Recognize the importance of preventive counseling and develop skill to respond to disciplinary problems and grievance among students **CO 28:** Recognize the importance of value-based education **CO 29:** Develop skill in ethicaldecision making and maintain ethical standards for students **CO 30:** Introduce knowledge ofEBT and its applicationin nursing education
Introduction To Forensic Nursing And Indian Laws	**CO 1:** Describe the nature of forensic science and discus issues concerning violence **CO 2:** Explain concepts of forensic nursing and scope of practice for forensic nurse **CO 3:** Identify members of forensic team and describe roleof forensic nurse **CO 4:** Describe fundamental rights and human rightscommission **CO 5:** Explain Indianjudicial systemand laws **CO 6:** Discuss the importance ofPOSCO Act
Child Health Nursing -Ii	**CO 1:** Describe the etiology, pathophysiology, clinical manifestation and nursing management of children with disordersof cardiovascular, gastrointestinal, genitourinary, andnervous system **CO 2:** Describe the etiology,pathophysiology, clinical manifestation and nursing management of children with Orthopedic disorders,eye, ear and skin disorders **CO 3:** Explain the preventive measures and strategiesfor children with communicable diseases **CO 4:** Describe the management of children with behavioral & social problems **CO 5:** Identify the social &welfare services for challenged children
Mental Health Nursing-Ii	**CO 1:** Describe the etiology, psycho- dynamics, clinical manifestations, diagnostic criteria and management ofpatients with substance use disorders **CO 2:** Describe the etiology, psycho- dynamics, clinical manifestations, diagnostic criteria and management ofpatients with personality, and sexual disorders **CO 3:** Describe the etiology, psycho- pathology, clinical manifestations, diagnostic criteria and management of childhood and

	adolescent disordersincluding mental deficiency **CO 4:** Describe the etiology, psycho- pathology, clinical manifestations, diagnostic criteria and management oforganic brain disorders. **CO 5:** Identify psychiatricemergencies and carry out crisis intervention **CO 6:** Explain legal aspects applied in mental health settings and role ofthe nurse **CO 7:** Describe the modelof preventive psychiatry **CO 8:** Describe Community Mentalhealth services and role of the nurse
Nursing Management And Leadership	**CO 1:** Explore the health care, development ofnursing services and education in India and trends **CO 2:** Explain the principles andfunctions of management applied to nursing **CO 3:** Describe the introductory concepts of management asa process **CO 4:** Describe theessential elements of planning **CO 5:** The concepts of organizing including hospital organization **CO 6:** The significance of human resourcemanagement (HRM) and material management and discuss its elements **CO 7:** Explain the procedural steps of material management **CO 8:** Develop managerial skill in inventory control and actively participate inprocurementprocess **CO 9:** Describe the important methods of supervision andguidance **CO 10:** Discuss the significance and changingtrends of nursing leadership **CO 11:** Analyze the different leadership styles and develop leadership competencies **CO 12:** Explain the process of controlling andits activities **CO 13:** Explain the concepts of organizationalbehavior and group dynamics **CO 14:** Describe thefinancial managementrelated to nursing services **CO 15:** Review the concepts, principles andmethods and use of nursinginformatics **CO 16:** Review personal management in terms of management of emotions, stressand resilience **CO 17:** Describe the process of establishing educational institutions andits accreditationguidelines **CO 18:** Explain the planning and organizing functions of a nursing

	college **CO 19:** Develop understanding of staffing thecollege and selecting the students **CO 20:** Analyze the leadership andmanagement activities in an educational organization **CO 21:** Identify variouslegal issues andlaws relevant tonursing practice **CO 22:** Explain variousopportunities for professionaladvancement
Clinical Practicum	**CO 1:** Prepare organizational chart of college **CO 2:** Formulate job description for tutors **CO 3:** Master plan, time table and clinical rotation **CO 4:** Prepare student anecdotes **CO 5:** Participate in planning, conducting and evaluation of clinical teaching **CO 6:** Participate in evaluation of students' clinical experience **CO 7:** in planning and conducting practical examination OSCE – end of posting
Midwifery/ Obstetrics and Gynecology (OBG) Nursing - I	**CO 1:** Explain the history and current scenario of midwifery in India **CO 2:** Review vital health indicator **CO 3:** Describe the various national health programs related to RMNCH+A **CO 4:** Identify the trendsand issues in midwifery **CO 5:** Discuss the legal and ethical issues relevant to midwifery practice **CO 6:** Review the anatomy and physiology of human reproductive system **CO 7:** Provide preconceptioncare to eligible couples **CO 8:** Describe the physiology, assessment and management of normal pregnancy **CO 9:** Demonstrate knowledge, attitude and skills of midwifery practice throughout 1st,2nd and 3rd trimesters **CO 10:** Apply the physiology of labour in promoting normal childbirth **CO 11:** Describe the management and careduring labour **CO 12:** Discuss how to maintain a safe environment for labour **CO 13:** Work effectively forpain management during labour **CO 14:** How the midwife provides care and support for the women during birth to enhance physiological birthing and promote normal birth **CO 15:** Assess and provide care of the newborn immediately following birth **CO 16:** Discuss the impact of labour and birth as a transitional event in the woman's life **CO 17:** Ensure initiation ofbreast feeding and adequate latching **CO 18:** Describe the physiology, management and care of normal

	puerperium **CO 19:** Discuss the need for and provision of compassionate, family centered midwifery care of the newborn **CO 20:** Describe the assessment and careof normal neonate **CO 21:** Explain various methods of family planning and role of nurse/midwife in providing family planning services **CO 22:** Describe youth friendly services and role of nurses/ midwives **CO 23:** Recognize the role of nurses/midwives in gender based violence
Clinical Postings	**CO 1:** Perform antenatalassessment **CO 2:** Perform laboratory tests for antenatal women and assist in selected antenatal diagnostic procedures **CO 3:** Counsel antenatal women **CO 4:** Monitor labour using partograph **CO 5:** Provide care to womenduring labour **CO 6:** Conduct normal childbirth, provide care to mother and immediate care of newborn **CO 7:** Perform postnatalassessment **CO 8:** Provide care to normalpostnatal mothers and newborn **CO 9:** Provide postnatal counseling **CO 10:** Provide family welfareservices

S,NO	SUBJECT	COURSEOUTCOME
1	COHN SEMESTER 7	CO1. Demonstrate beginning practice competencies/skills relevant to provide comprehensive primary health care/communitybased care to clients with common diseases and disorders including emergency and first aid care at home/clinics/centres CO2. as per predetermined protocols/drug standing orders approved by MOH&FW CO3. Provide maternal, newborn and child care, and reproductive health including adolescent care in the urban and rural CO4. health care settings CO5. Describe the methods of collection and interpretation of demographic data CO6. Explain population control and its impact on the society and describe the approaches towards limiting family size CO7. Describe occupational health hazards, occupational diseases and the role of nurses in occupational health programs CO8. Identify health problems of older adults and provide primary care, counseling and supportive health services CO9. Participate in screening for mental health problems in the community and providing appropriate referral services CO10. Discuss the methods of data collection for HMIS, analysis and interpretation of data CO11. Discuss about effective management of health information in community diagnosis and intervention CO12. Describe the management system of delivery of community health services in rural and urban areas CO13. Describe the leadership role in guiding, supervising, and monitoring the health services and the personnel at the PHCs, SCs and community level including financial management and maintenance of records & reports CO14. Identify the roles and responsibilities of health team members and explain their job description CO15. Demonstrate initiative in preparing themselves and the community for disaster preparedness and management CO16. Demonstrate skills in proper bio-medical waste management as per protocols CO17. Explain nurses‘ role in identification, primary management and referral of clients with common disorders/ conditions and emergencies including first aid CO18. Provide reproductive, maternal, newborn and childcare, including adolescent care in the urban and rural health care settings CO19. Discuss the concepts and scope of demography CO20. Discuss population explosion and its impact on social and economic development of India CO21. Describe the various methods of population control CO22. Describe occupational health hazards, occupational diseases and the role of nurses in Occupational health programs CO23. Identify health problems of older adults and provide primary care, counseling and supportive health services CO24. Describe screening for mental health problems in the community, take preventive measures and provide

		appropriate referral services CO25. Discuss about effective management of health information in community diagnosis and intervention CO26. Describe the system management of delivery of community health services in rural and urban areas CO27. Describe the leadership role in guiding, supervising, SSand monitoring the health services and the personnel at the PHCs, SCs and community level including financial management Describe the roles and responsibilities of Mid-Level Health Care Providers (MHCPs) in Health Wellness Centers (HWCs) CO28. Demonstrate initiative in preparing themselves and the community for disaster preparedness and management CO29. Describe the importance of biomedical waste management, its process and management CO30. Explain the roles and functions of various national and international health agencies
2	RESEARCH	DESCRIPTION: The Course is designed to enable students to develop an understanding of basic concepts of research, research process and statistics. It is further, structured to conduct/ participate in need-based research studies in various settings and utilize the research findings to provide quality nursing care. The hours for practical will be utilized for conducting individual/group research project.COMPETENCIES: On completion of the course, students will be competent to CO1. Identify research priority areas CO2. Formulate research questions/problem statement/hypotheses CO3. Review related literature on selected research problem and prepare annotated bibliography CO4. . Prepare sample data collection tool CO5. Analyze and interpret the given data CO6. Practice computing, descriptive statistics and correlation CO7. Draw figures and types of graphs on given select data CO8. Develop a research proposal CO9. Plan and conduct a group/individual research project CO10. describe the concept of research, terms, need and areas of research in nursing Explain the steps of research process State the purposes and steps of Evidence Based Practice CO11. Identify and state the research problem and objectives CO12. Review the related literature CO13. Describe the Research approaches and designs CO14. Explain the Sampling process CO15. Describe the methods of data collection CO16. Analyze, Interpret and summarize the research data CO17. Explain the use of statistics, scales of measurementand graphical presentation of data Describe the measures of central tendency and variability and methods of Correlation CO18. communicate and utilize the research

		findings
3	OBG	DESCRIPTION: This course is designed for students to develop knowledge and competencies on the concepts and principles of obstetric and gynecology nursing. It helps them to acquire knowledge and skills in rendering respectful maternity care to high risk woman during antenatal, natal and postnatal periods in hospitals and community settings and help to develop skills in initial management and referral of high risk neonates. It would also help students to gain knowledge, attitude and skills in caring for women with gynecological disorders. COMPETENCIES: On completion of the course, the students will be able to: CO1. Describe the assessment, initial management, referral and respectful maternity care of women with high risk pregnancy. CO2. Demonstrate competency in identifying deviation from normal pregnancy. CO3. Describe the assessment, initial management, referral and nursing care of women with high risk labour. CO4. Assist in the conduction of abnormal vaginal deliveries and caesarean section. CO5. Describe the assessment, initial management, referral and nursing care of women with abnormal postnatal conditions. CO6. Demonstrate competency in the initial management of complications during the postnatal period. CO7. Demonstrate competency in providing care for high risk newborn. CO8. Apply nursing process in caring for high risk women and their families. CO9. Describe the assessment and management of women with gynecological disorders. CO10. Demonstrate skills in performing and assisting in specific gynecological procedures. CO11. Describe the drugs used in obstetrics and gynecology. CO12. Counsel and care for couples with infertility. CO13. Describe artificial reproductive technology.
4	OBG ORACTICLE	PRACTICE COMPETENCIES: On completion of the course, the students will be able to: CO1. Identify, stabilize and refer antenatal women with complications CO2. Provide care to antenatal women with complications CO3. Provide post abortion care& counselling CO4. Assist in the conduction of abnormal vaginal deliveries and caesarean section. CO5. Demonstrate skills in resuscitating the newborn CO6. Assist and manage complications during labour CO7. Identify postnatal and neonatal complications, stabilize and refer them CO8. Provide care for high risk antenatal, intranatal and postnatal women and their families using nursing process approach CO9. Provide care for high risk newborn

		CO10. Assist in advanced clinical procedures in midwifery and obstetric nursing CO11. Provide care for women during their non childbearing period. CO12. Assess and care for women with gynecological disorders CO13. Demonstrate skills in performing and assisting in specific gynecological procedures CO14. Counsel and care for couples with infertility Counsel women and their families on pre-conception care CO15. Demonstrate lab tests ex. urine pregnancy test CO16. Perform antenatal assessment of pregnant women CO17. Assess and care for normal antenatal mothers CO18. Assist and perform specific investigations for antenatal mothers CO19. Counsel mothers and their families on antenatal care and preparation for parenthood CO20. Conduct childbirth education classes CO21. Organize labour room CO22. Prepare and provide respectful maternity care for mothers in labour CO23. Perform per-vaginal examination for a woman in labour if indicated CO24. Conduct normal childbirth with essential newborn care CO25. Demonstrate skills in resuscitating the newborn CO26. Assist women in the transition to motherhood CO27. Perform postnatal and newborn assessment CO28. . Provide care for postnatal mothers and their newborn CO29. . Counsel mothers on postnatal and newborn care CO30. . Perform PPIUCD insertion and removal CO31. . Counsel women on family planning and participate in family welfare services . Provide youth friendly health services CO32. . Identify, assess, care and refer women affected with gender based violence **SKILL LAB: Procedures/Skills for demonstration and return demonstration:** 1. Antenatal assessment and identification of complications 2. Post abortion care & counseling 3. Counseling antenatal women for complication readiness 4. Mechanism of labour – abnormal 5. Assisting in the conduction of abnormal vaginal deliveries and caesarean section. 6. Management of complications during pregnancy/labour/post partum (case studies/simulated scenarios) 7. Administration of Inj. Magnesium sulphate 8. Starting and maintaining an oxytocin drip for PPH 9. Management of PPH – Bimanual compression of uterus 10. Management of PPH – Balloon tamponade 11. Instruments used in obstetrics and gynecology 12. Visual inspection of cervix with acetic acid 13. Cervical biopsy

		14. Breast examination 15. Counselling of infertile couples

Program: M.Sc.(Nursing)

Program Outcome: The aim of the postgraduate program in nursing is to prepare graduates to assume responsibilities as nurse specialists, consultants, educators, administrators in a wide variety of professional settings

Program Specific Outcomes:

On Completion of the two year M.Sc Nursing programme, the graduate will be able to:-

1. Demonstrate advance competence in practice of nursing
2. Practice as a nurse specialist.
3. Demonstrate leadership qualities and function effectively as nurse educator and manager.
4. Demonstrate skill in conducting nursing research, interpreting and utilizing the findings from health-related research.
5. Demonstrate the ability to plan and effect change in nursing practice and in the health care delivery system.
6. Establish collaborative relationship with members of other disciplines
7. Demonstrate interest in continued learning for personal and professional advancement Utilize/apply the concepts, theories and principles of nursing science

S. No	Course	Course Outcome
	M.Sc.(N) Placement: Ist year	
1.	**Nursing Education**	CO1.Explain the aims of education, philosophies, trends in education and health: its impact on nursing education. CO2. Describe the teaching learning process. CO3. Prepare and utilize various instructional media and methods in teaching learning process. CO4. Demonstrate competency in teaching, using various instructional strategies. CO5. Critically analyze the existing nursing educational programs, their problems, issues and future trends. CO6. Describe the process of curriculum development, and the need and methodology of curriculum change, innovation and integration. CO7. Plan and conduct continuing nursing education programs. CO8. Critically analyze the existing teacher preparation programs in nursing. CO9.Demonstrate skill in guidance and counseling. CO10. Describe the problems and issues related to administration of nursing curriculum including selection and organization of clinical experience. CO11. Explain the development of standards and accreditation process in nursing education programs. CO12. Identify research priorities in nursing education. CO13. Discuss various models of collaboration in nursing education and services.

2.	**Advance Nursing Practice**	CO1. Appreciate and analyze the development of nursing as a profession. CO2. Describe ethical, legal, political and economic aspects of health care delivery and nursing practice. CO3. Explain bio- psycho- social dynamics of health, life style and health care delivery system. CO4. Discuss concepts, principles, theories, models, approaches relevant to nursing and their application. CO5. Describe scope of nursing practice. CO6. Provide holistic and competent nursing care following nursing process approach. CO7. Identify latest trends in nursing and the basis of advance nursing practice. CO8. Perform extended and expanded role of nurse. CO9. Describe alternative modalities of nursing care. CO10. Describe the concept of quality control in nursing. CO11. Identify the scope of nursing research. CO12. Use computer in patient care delivery system and nursing practice. CO13. Appreciate importance of self-development and professional advancement.
3.	**Clinical Speciality – I Medical Surgical Nursing**	CO1.Appreciate the trends & issues in the field of Medical – Surgical Nursing as a speciality. CO2. Apply concepts & theories related to health promotion. CO3. Appreciate the client as a holistic individual. CO4. Perform physical, psychosocial assessment of Medical – Surgical

		patients. CO5. Apply Nursing process in providing care to patients. CO6. Integrate the concept of family centred nursing care with associated disorder such as genetic, congenital and long-term illness. CO7. Recognize and manage emergencies with Medical- Surgical patients. CO8. Describe various recent technologies & treatment modalities in the management of critically ill patients. CO9. Appreciate the legal & ethical issues relevant to Medical – Surgical Nursing. CO10. Prepare a design for layout and management of Medical – Surgical Units. CO11. Appreciate the role of alternative systems of Medicine in care of patients. CO12. Incorporate evidence-based Nursing practice and identify the areas of research in the field of Medical – Surgical Nursing. CO13. Recognize the role of Nurse practitioner as a member of the Medical – Surgical health team. CO14. Teach Medical – Surgical Nursing to undergraduate nursing students & in-service nurses.

4.	**Clinical Specialty-I Obstetric and Gynecological Nursing**	CO1.Appreciate the trends in the field of midwifery, obstetrics and gynaecology as a speciality. CO2. Describe the population dynamics and indicators of maternal and child health CO3. Describe the concepts of biophysical, psychological and spiritual aspects of normal pregnancy, labor and puerperium. CO4. Provide comprehensive nursing care to women during reproductive period and newborns. CO5. Integrate the concepts of family centered nursing care and nursing process approach in obstetric and gynaecological nursing. CO6. Identify and analyze the deviations from normal birth process and refer appropriately. O7. Describe the pharmacological agents, their effects during pregnancy, child birth, puerperium, lactation and the role of nurse CO8. Counsel adolescents, women and families on issues pertaining to pregnancy, child birth and lactation CO9. Describe the role of various types of complementary and alternative therapies in obstetric and gynecological nursing. CO10. Incorporate evidence-based nursing practice and identify the areas of research in the field of obstetric and gynecological nursing. CO11. Describe the recent advancement in contraceptive technology and birth control measures CO12. Appreciate the legal and ethical issues pertaining to obstetric and gynecological nursing
5.	**Clinical Specialty –I Child Health (Pediatric) Nursing**	CO1.Appreciate the history and developments in the field of pediatrics and Pediatric nursing as a specialty CO2. Apply the concepts of growth and development in providing care to the Pediatric clients and their families. CO3. Appreciate the child as a holistic Individual. CO4. Perform physical, developmental, and nutritional assessment of pediatric Clients. CO5. Apply nursing process in providing nursing care to neonates & children. CO6. Integrate the concept of family centered pediatric nursing care with

		related areas such as genetic disorders, congenital malformations and long term illness. CO7. Recognize and manage emergencies in neonates CO8. Describe various recent technologies and treatment modalities in the management of high risk neonates CO9. Appreciate the legal and ethical issues pertaining to pediatric and neonatal nursing CO10. Prepare a design for layout and management of neonatal units CO11. Incorporate evidence based nursing practice and identify the areas of research in the field of pediatric/neonatal nursing CO12. Recognize the role of pediatric nurse practitioner and as a member of the pediatric and neonatal health team CO13. Teach pediatric nursing to undergraduate students & in-service nurse

6.	**Clinical Speciality – I Mental health (Psychiatric) Nursing**	CO1.Appreciate the trends and issues in the field of psychiatry and psychiatric nursing. CO2.Explain the dynamics of personality development and human behaviour. CO3.Describe the concepts of psychobiology in mental disorders and its implications for psychiatric nursing. CO4. Demonstrate therapeutic communications skills in all interactions. CO5.Demonstrate the role of psychiatric nurse practitioner in various therapeutic modalities. CO6. Establish and maintain therapeutic relationship with individual and groups. CO7. Uses assertive techniques in personal and professional actions CO8. Promotes self-esteem of clients, others and self CO9. Apply the nursing process approach in caring for patients with mental disorders. CO10. Describe the psychopharmacological agents, their effects and nurses role. CO11. Recognize the role of psychiatric nurse practitioner and as a member of the psychiatric and mental health team. CO12. Describe various types of alternative system of medicines used in psychiatric settings. CO13. Incorporate evidence based nursing practice and identify the areas of research in the field of psychiatric nursing.
7.	**Clinical Speciality- I Community Health Nursing**	CO1.Appreciate the history and development in the field of Community Health and Community Health Nursing. CO2. Appreciate role of individuals and families in promoting health of the Community. CO3. Perform physical, developmental and nutritional assessment of individuals, families and groups. CO4. Apply the concepts of promotive, preventive, curative and rehabilitative aspects of health while providing care to the people. CO5. Apply nursing process approach while providing care to individuals, families, groups and community. CO6. Integrate the concepts of family centered nursing approach while providing care to the community. CO7. Recognize and participate in the management of emergencies, epidemics and disasters. CO8. Apply recent technologies and care modalities while delivering community health nursing care.
		CO9. Appreciate legal and ethical issues pertaining to community health nursing care. CO10. Conduct community health nursing care projects. CO11. Participate in planning, implementation and evaluation of various national health and family welfare programmes at local, state and the national level. CO12. Incorporate evidence based nursing practice and identify the areas of research in the community settings.

8.	**Nursing Research and Statistics**	CO1.Define basic research terms and concepts. CO2. Review literature utilizing various sources CO3. Describe research methodology CO4. Develop a research proposal. CO5. Conduct a research study. CO6. Communicate research findings CO7. Utilize research findings CO8. Critically evaluate nursing research studies. CO9. Write scientific paper for publication.

	Placement -2nd Year	
	Course	**Course Plan**
	Nursing Management	CO1. Describe the philosophy and objectives of the health care institutions at various levels. CO2. Identify trends and issues in nursing CO3. Discuss the public administration, health care administration vis a vis nursing administration CO4. Describe the principles of administration applied to nursing CO5. Explain the organization of health and nursing services at the various levels/institutions. CO6. Collaborate and co-ordinate with various agencies by using multi-sectoral approach CO7. Discuss the planning, supervision and management of nursing workforce for various health care settings. CO8. Discuss various collaborative models between nursing education and nursing service to improve the quality of nursing care CO9. Identify and analyse legal and ethical issues in nursing administration CO10. Describe the process of quality assurance in nursing services. CO11. Demonstrate leadership in nursing at various levels
	A. Medical Surgical Nursing - Cardio Vascular and Thoracic Nursing	CO1. Appreciate trends and issues related to cardio vascular and thoracic Nursing. CO2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of cardio vascular and thoracic conditions CO3. Participate in national health programs for health promotion, prevention and rehabilitation of patients with cardio vascular and thoracic conditions CO4. Perform physical, psychosocial & spiritual assessment CO5. Assist in various diagnostic, therapeutic and surgical procedures CO6. Apply nursing process in providing comprehensive care to patients with cardio vascular and thoracic conditions CO7. Demonstrate advance skills/competence in managing patients with cardio vascular and thoracic conditions including Advance Cardiac Life Support.

		CO8. Describe the various drugs used in cardio vascular and thoracic conditions and nurses responsibility CO9. Demonstrate skill in handling various equipments/gadgets used for critical care of cardio vascular and thoracic patients CO10. Appreciate team work & coordinate activities related to patient care. CO11. Practice infection control measures. CO12. Identify emergencies and complications & take appropriate measures CO13. Discuss the legal and ethical issues in cardio vascular and thoracic nursing CO14. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs. CO15. Appreciate the role of alternative system of medicine in care of patient CO16. Incorporate evidence based nursing practice and identify the are as of research in the field of cardio vascular and thoracic nursing CO17. Identify the sources of stress and manage burnout syndrome among health care providers. CO18. Teach and supervise nurses and allied health workers. CO19. Design a layout of ICCU and ICTU and develop standards for cardio vascular and thoracic nursing practice.
	B. Medical Surgical Nursing - Critical Care Nursing	CO1. Appreciate trends and issues related to Critical Care Nursing. CO2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of critically ill patients CO3. Describe the various responsibility CO4. Perform physical, psychosocial & spiritual assessment CO5. Demonstrate advance skills/competence in managing critically ill patients including Advance Cardiac Life Support. CO6. Demonstrate skill in handling various equipments/gadgets used for critical care CO7. Provide comprehensive care to critically ill patients. CO8. Appreciate team work & coordinate activities related to patient care. CO9. Practice infection control measures. CO10. Assess and manage pain . CO11. Identify complications & take appropriate measures. CO12. Discuss the legal and ethical issues in critical care nursing CO13. Assist patients and their family to cope with emotional distress, spiritual, grief and anxiety CO14. Assist in various diagnostic, therapeutic and surgical procedures CO15. Incorporate evidence based nursing practice and identify the areas of research in the field of critical care nursing drugs used in critical care and nurses CO16. Identify the sources of stress and manage burnout syndrome among health care providers. CO17. Teach and supervise nurses and allied health workers. CO18. Design a layout of ICU and develop standards for critical care nursing practice.

	C. Medical Surgical Nursing- Oncology Nursing	CO1. Explain the prevention, screening and early detection of cancer CO2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of oncological disorders of various body systems CO3. Describe the psychosocial effects of cancer on patients and families. CO4. Demonstrate skill in administering/assisting in various treatment modalities used for patients with cancer CO5. Apply nursing process in providing
		cancer. CO6. Apply specific concepts of pain management CO7. Appreciate the care of death and dying patients and value of bereavement support. CO8. Describe the philosophy, concept and various dimensions of palliative care CO9. Appreciate the role of alternative systems of medicine in care of cancer patients CO10. Appreciate the legal & ethical issues relevant to oncology nursing CO11. Recognize and manage Oncological emergencies CO12. Counsel the patients with cancer and their families CO13. Incorporate evidence based nursing practice and identify the areas of research in the field of oncology nursing CO14. Recognize the role of oncology nurse practitioner as a member of oncology team CO15. Collaborate with other agencies and utilize resources in caring for cancer patients. CO16. Teach and supervise nurses and allied health workers. CO17. Design a layout and develop standards for management of oncology units/hospitals and nursing care.
	D. Medical Surgical Nursing- Neurosciences Nursing	CO1. Appreciate trends and issues related to neurology and neurosurgical Nursing. CO2. Review the anatomy and physiology of nervous system CO3. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of patients with neurological and neurosurgical disorders CO4. Perform neurological assessment and assist in diagnostic procedures CO5. Describe the concepts and principles of neuroscience nursing CO6. Describe the various drugs used in neurosciences and nurses responsibility CO7. Assist in various therapeutic and surgical procedures in neuroscience nursing CO8. Demonstrate advance skills/competence in managing patients with neurological and neurosurgical disorder following nursing process approach CO9. Identify psychosocial problems of patients with disabilities and assist patients and their family to cope with emotional distress, spiritual, grief and anxiety CO10. Participate in preventive, promotive and rehabilitative services for neurological and neurosurgical patients. CO11. Explain the legal and ethical issues related to brain death, organ transplantation and practice of neuroscience nursing CO12. Incorporate evidence based nursing practice and identify the areas of research in the field of neuroscience nursing

		CO13. Organise and conduct inservice education program for nursing personnel. CO14. Develop standards of care for quality assurance in neuroscience nursing practice CO15. Identify the sources of stress and manage burnout syndrome among health care providers. CO16. Teach and supervise nurses and allied health workers. CO17. Plan and develop physical layout of neuro intensive care unit
	E. Medical Surgical Nursing- Nephro-	CO1. Appreciate trends and issues related to nephro and urological nursing
	Urology Nursing	CO2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of nephro and urological conditions CO3. Perform physical, psychosocial & spiritual assessment CO4. Assist in various diagnostic, therapeutic and surgical interventions CO5. Provide comprehensive nursing care to patients with nephro and urological conditions CO6. Describe the various drugs used in nephro and urological conditions and nurses responsibility CO7. Demonstrate skill in handling various equipments/gadgets used for patients with nephro and urological conditions CO8. Appreciate team work & coordinate activities related to patient care. CO9. Practice infection control measures. CO10. Identify emergencies and complications & take appropriate measures CO11. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs CO12. Discuss the legal and ethical issues in nephro and urological nursing CO13. Identify the sources of stress and manage burnout syndrome among health care providers CO14. Appreciate the role of alternative system of medicine in the care of patient CO15. Incorporate evidence based nursing practice and identify the areas of research in the field of nephro and urological nursing CO16. Teach and supervise nurses and allied health workers. CO17. Design a layout of kidney transplant unit and dialysis unit CO18. Develop standards of nephro urological nursing practice
	2.F. Medical Surgical Nursing - Orthopedic Nursing	CO1. Appreciate the history and developments in the field of orthopedic nursing CO2. Identify the psycho-social needs of the patient while providing holistic care. CO3. Perform physical and psychological assessment of patients with orthopedic conditions and disabilities. CO4. Describe various disease conditions and their management 5. Discuss various diagnostic tests required in orthopedic conditions CO6. Apply nursing process in providing care to patients with orthopedic conditions and those requiring rehabilitation. CO7. Recognize and manage orthopedic emergencies. CO8. Describe recent technologies and treatment modalities in the management of patients with orthopedic conditions and those requiring rehabilitation.

		CO9. Integrate the concept of family centered, long term care and community based rehabilitation to patients with orthopedic conditions. CO10. Counsel the patients and their families with orthopedic conditions CO11. Describe various orthotic and prosthetic appliances CO12. Appreciate the legal and ethical issues pertaining to patients with orthopedic conditions and those requiring rehabilitation. CO13. Appreciate the role of alternative system of medicine in care of patients with orthopedic conditions
	2.G. Medical Surgical Nursing - Gastro Enterology Nursing	CO1. Appreciate trends and issues related to gastro enterology nusing CO2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of gastrointestinal conditions CO3. Participate prevention conditions CO4. Perform physical, psychosocial & spiritual assessment CO5. Assist in various diagnostic, therapeutic and surgical procedures
		CO6. Provide comprehensive conditions CO7. Describe the various drugs used in gastrointestinal conditions and nurses responsibility CO8. Demonstrate skill in handling various equipments/gadgets used for patients with gastrointestinal conditions CO9. Appreciate team work & coordinate activities related to patient care. CO10. Practice infection control measures. CO11. Identify emergencies and complications & take appropriate measures CO12. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs CO13. Discuss the legal and ethical issues in GE nursing in national health programs for health promotion, and rehabilitation of patients with gastrointestinal care to patients with gastrointestinal CO14. Identify the sources of stress and manage burnout syndrome among health care providers CO15. Appreciate the role of alternative system of medicine in care of patient CO16. Incorporate evidence based nursing practice and identify the areas of research in the field of gastrointestinal nursing CO17. Teach and supervise nurses and allied health workers. CO18. Design a layout of Gastro entrology intensive care unit (GEICU) , liver care /transplant unit

3.	**Obstetric and Gynaecological Nursing-ii**	CO1. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of women with obstetric and gynaecological conditions CO2. Perform physical, psychosocial, cultural & spiritual assessment CO3. Demonstrate competence in caring for women with obstetrical and gynaecological conditions CO4. Demonstrate competence in caring for high risk newborn. CO5. Identify and Manage obstetrical and neonatal emergencies as per protocol. CO6. Practice infection control measures CO7. Utilize recent technology and various diagnostic, therapeutic modalities in the management of obstetrical , gynecological and neonatal care. CO8. Demonstrate skill in handling various equipments/gadgets used for obstetrical, gynaecological and neonatal care CO9. Teach and supervise nurses and allied health workers. CO10. Design a layout of speciality units of obstetrics and gynecology CO11. Develop standards for obstetrical and gynaecological nursing practice. CO12. Counsel women and families CO13.Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of women with obstetric and gynaecological conditions CO2. Perform physical, psychosocial, cultural & spiritual assessment CO3. Demonstrate competence in caring for women with obstetrical and gynaecological conditions CO4. Demonstrate competence in caring for high risk newborn. CO5. Identify and Manage obstetrical and neonatal emergencies as per protocol. CO6. Practice infection control measures CO7.Utilize recent technology and various diagnostic, therapeutic

		modalities in the management of obstetrical , gynecological and neonatal care. CO8. Demonstrate skill in handling various equipments/gadgets used for obstetrical, gynaecological and neonatal care CO9. Teach and supervise nurses and allied health workers. CO10.Design a layout of speciality units of obstetrics and gynecology CO11.Develop standards for obstetrical and gynaecological nursing practice. CO12. Counsel women and families CO13. Incorporate evidence based nursing practice and identify the areas of research in the field of obstetrical and gynaecological nursing CO14. Function as independent midwifery nurse practitioner

4.	**Pediatric (Child Health) Nursing-II**	CO1.Apply the nursing process in the care of ill infants to pre-adolescents in hospital and community CO2.Demonstrate advanced skills/competence in nursing management of children with medical and surgical problems CO3. Recognize and manage emergencies in children CO4. Provide nursing care to critically ill children CO5.Utilize the recent technology and various treatment modalities in the management of high risk children CO6.Prepare a design for layout and describe standards for management of pediatric units/hospitals CO7. Identify areas of research in the field of pediatric nursing
5.	**Psychiatric (Mental Health) Nursing-II**	CO1.Apply the nursing process in the care of patients with mental disorders in hospital and community CO2.Demonstrate advanced skills/competence in nursing management of patients with mental disorders CO3. Identify and care for special groups like children, adolescents, women, elderly, abused and neglected, people living with HIV/AIDS. CO4. Identify and manage psychiatric emergencies. CO5.Provide nursing care to critically ill patients with mental disorders CO6. Utilize the recent technology and various treatment modalities in the management of patients with mental disorders CO7. Demonstrate skills in carrying out crisis intervention. CO8. Appreciate the legal and ethical issues pertaining to psychiatric nursing. CO9. Identify areas of research in the field of psychiatric nursing. CO10.Prepare a design for layout and describe standards for management of Psychiatric units/emergency units/hospitals CO11. Teach psychiatric nursing to undergraduate students nurses. & inservice
7.	**Community Health Nursing-II**	CO1.Appreciate trends and issues related to community health Nursing - reproductive and child health, school health, Occupational health, international health, rehabilitation, geriatric and mental health. CO2.Apply epidemiological concepts and principles in community health nursing practice 3. Perform community health assessment and plan health programmes CO4.Describe the various components of Reproductive and child health programme. CO5.Demonstrate leadership abilities in organizing community health nursing services by using inter-sectoral approach. CO6.Describe the role and responsibilities of community health nurse in various national health and family welfare programmes
		CO7. Participate in the implementation of various national health and family welfare programme CO8. Demonstrate competencies in providing family centered nursing care independently CO9.Participate/Conduct research for new insights and innovative solutions to health problems CO10. Teach and supervise nurses and allied health workers. CO11.Design a layout of sub center/Primary health center/Community health center and develop standards for community health nursing practice.

Program Outcomes, Program Specific Outcomes, Course Outcomes

MPH (Masters in Public Health)

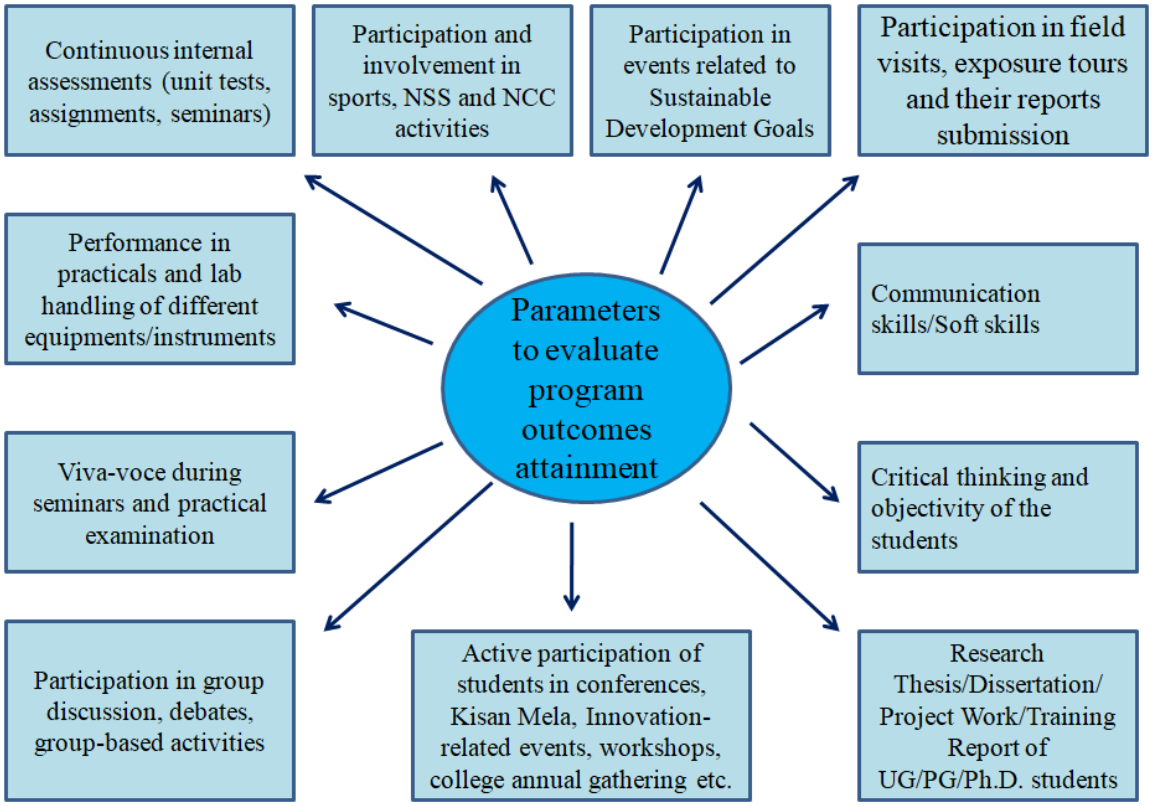
Program Outcome	The course will help candidate to develop skills for collecting and interpreting information related to health, policy planning and development skills to address public health challenges, communication skills for advocacy, dissemination and evaluation of public health data and information, financial planning and management skills for running public health programs in the country.
Program Specific Outcome	The students will acquire the necessary skills to work as Epidemiologists, Public Health Consultants, Public Health Administrator, Public Health Researcher, NGO manager at local and national level. They can also contribute to the process of policy making by disseminating their research findings to policy makers.
Courses: MPH	Outcomes
Principles and Practices of Public Health	To analyse and implement principles of public health to practice and its impact on population health, equalities and quality of healthcare.
Introduction to Health System and Policy in Developing Countries	Helps the students to understand the policy process and policy environment within and outside the countries
Health Management: Management Principles and Practices (Strategic management	To understand the administration, oversight of health systems, public health systems and entire hospitals and other medical facilities.
Demography and Population Sciences	Helps to understand the size, structure and movement of population over time and its relation to health
Principles of Social Research Methods and Basic Biostatistics	Helps to understand the traditional techniques of statistics applied to subject of public health
Basic Epidemiology	To understand the determinants of disease and causes which influence disease occurrence
Introduction to Health Economics	Provides information on efficient use of available resources for maximum health benefits.
Health Promotion Approaches and Methods	To engage the individuals and communities as well as empower them to choose healthy behaviour
Introduction to Financial Management and Budgeting	To provide understanding on proper management of resources in health

	organisations to improve patient care and minimise risk
Social and Behaviour Change, Effective Communication in Health Care	Details the information on how interventions in public health can be used to improve health behaviour in the population
Reproductive, Maternal Health, Child Health and adolescent (RMNCH+A)	It focuses on the measures taken to improve maternal and child health which not only benefits them but also strengthens families and communities
Introduction to Health Programs and evaluation	It includes how comprehensive health programs are used to achieve the health of the population
Environment and Occupational Health	It helps to understand how does physical, social and work environment has a bearing on health of the individuals and population
Law and Ethics in Public Health	Details the best legal practices available for the benefits of the patients
Elective Subjects	
Epidemiology	It helps to understand the distribution of diseases with more advanced applications.
Health program, Policy and Planning	Helps the students in translating research for health policy and advocacy
Health system management	Provides leadership and direction for the organisations that deliver health services in a detailed manner
RMNCH+ A	Details the fundamentals of reproductive health and nutrition for mother and child

Attainment of Programme Outcomes, Programme Specific Outcomes and Course Outcomes

The performance of the students in their respective programmes is measured on the basis of various curricular (continuous assessment, assignments, mid-sessional examination and end-semester examination) and co-curricular activities. The methods and parameters on the basis of which the program outcomes attainment of different departments is ascertained on varied points are listed below:

1. **Continuous internal assessments (unit tests, assignments, seminars)**
2. **Performance in practicals and lab handling of different equipments/instruments**
3. **Viva-voce during seminars and practical examination**
4. **Participation in group discussion, debates, group-based activities.**
5. **Communication skills/Soft skills**
6. **Critical thinking and objectivity of the students**
7. **Research Thesis/Dissertation/Project Work/Training Report of UG/PG/Ph.D. students**
8. **Active participation of students in conferences, Kisan Mela, Innovation-related events, workshops, college annual gathering etc.**
9. **Participation and involvement in sports, NSS and NCC activities**
10. **Participation in events related to Sustainable Development Goals**
11. **Participation in field visits, exposure tours and their reports submission**



The attainment of Program Outcomes is assessed at different levels on the basis of performance in assessment and final year examinations:

Attainment Level 1 : **0-25%** Students successfully completed the respective program

Attainment Level 2 : **26-49%** Students successfully completed the respective program

Attainment Level 3 : **50-74%** Students successfully completed the respective program

Attainment Level 4 : **75-100%** Students successfully completed the respective program

Program Outcomes Attainment Level
(Year 2020-21)

Program Code	Program	Number of students appeared in the final year examination	Number of students passed in final year examination	Result %	Attainment level
BAHU	B.A. Humanities	43	42	97.67	**4**
BSPSY	B.Sc. (Hons.) Psychology	12	12	100	**4**
MSPSY	M.Sc. Psychology	6	6	100	**4**
MSCH	M.Sc. Chemistry	3	3	100	**4**
BSMA	B.Sc. (Hons.) Maths	4	4	100	**4**
BSMIC	B.Sc. (Hons.) Microbiology	3	3	100	**4**
BSM	B.Sc. Medical	5	5	100	**4**
BSNM	B.Sc Non-Medical	9	9	100	**4**
MSBOT	M.Sc. Botany	8	8	100	**4**
MSMA	M.Sc. Mathematics	5	5	100	**4**
MSMIC	M.Sc. Microbiology	1	1	100	**4**
MSZOO	M.Sc. Zoology	11	11	100	**4**
BSAG	B.Sc. (Hons.) Agriculture	69	69	100	**4**
BTFT	B.Tech. Food Technology	6	6	100	**4**
MSAGN	M.Sc. Agronomy	8	8	100	**4**
MSFT	M.Sc. Food Technology	2	2	100	**4**
MSGPB	M.Sc. Genetics and Plant Breeding	2	2	100	**4**
MSHOT	M.Sc.Horticulture	4	4	100	**4**
MSPP	M.Sc. Plant Pathology	2	2	100	**4**
BAMU	B.A. (Hons.) Music (GurmatSangeet)	11	10	90.90	**4**
BAMU	B.A. (Hons.) Music (Instrumental)	2	2	100	**4**
BAMU	B.A. (Hons.) Music (Tabla)	1	1	100	**4**
MAMU	M.A.Music (Instrumental)	2	2	100	**4**
BED	B.Ed.	15	15	100	**4**
BSEC	B.Sc. (Hons.) Economics	7	7	100	**4**
MSEC	M.Sc. Economics	3	3	100	**4**
BCOM	B.Com. (Hons.)	17	17	100	**4**
MBA	MBA (Finance)	4	4	100	**4**
MBA	MBA (HR)	1	1	100	**4**
BTCS	B.Tech. (CSE)	16	16	100	**4**
BTET	B.Tech. (ETE)	9	8	88.88	**4**
BSN	B.Sc. Nursing	61	61	100	**4**
MSN	M.Sc. Nursing	16	16	100	**4**

Program Outcomes Attainment Level
(Year 2021-22)

Program Code	Program	Number of students appeared in the final year examination	Number of students passed in final year examination	Result %	PO Attainment level
BAHU	B.A. Humanities	45	40	88.88	**4**
BSPSY	B.Sc. (Hons.) Psychology	10	10	100	**4**
MSPSY	M.Sc. Psychology	3	3	100	**4**
MSCH	M.Sc. Chemistry	1	1	100	**4**
BSMA	B.Sc. (Hons.) Mathematics	5	5	100	**4**
BSMIC	B.Sc. (Hons.) Microbiology	1	1	100	**4**
BSM	B.Sc. Medical	3	2	66.66	**3**
BSNM	B.Sc. Non-Medical	4	4	100	**4**
MSBOT	M.Sc. Botany	4	4	100	**4**
MSMIC	M.Sc. Microbiology	3	3	100	**4**
MSZOO	M.Sc. Zoology	4	4	100	**4**
BSAG	B.Sc. (Hons.) Agriculture	64	63	98.43	**4**
BTFT	B.Tech. Food Technology	13	13	100	**4**
MSAGN	M.Sc. Agronomy	7	7	100	**4**
MSFT	M.Sc. Food Technology	2	2	100	**4**
MSGPB	M.Sc. Genetics and Plant Breeding	2	2	100	**4**
MSHOT	M.Sc.Horticulture	2	2	100	**4**
BAMU	B.A. (Hons.) Music (GurmatSangeet)	9	8	88.88	**4**
BAMU	B.A. (Hons.) Music (Instrumental)	5	5	100	**4**
BAMU	B.A. (Hons.) Music (Tabla)	2	2	100	**4**
MAMU	M.A. Music (Instrumental)	7	7	100	**4**
MAMU	M.A. Music (Vocal)	5	5	100	**4**
BED	B.Ed.	19	16	84.21	**4**
BSEC	B.Sc. (Hons.) Economics	3	3	100	**4**
MSEC	M.Sc. Agri. Economics	1	1	100	**4**
BCOM	B.Com. (Hons.)	15	14	93.33	**4**
MBA	MBA (Finance)	3	3	100	**4**
MBA	MBA (Marketing)	1	1	100	**4**
BTCS	B.Tech. (CSE)	14	14	100	**4**
BTET	B.Tech. (ETE)	5	5	100	**4**
BSN	B.Sc. Nursing	58	57	98.27	**4**
MSN	M.Sc. Nursing	15	15	100	**4**

Program Outcomes Attainment Level
(Year 2022-23)

Program Code	Program	Number of students appeared in the final year examination	Number of students passed in final year examination	Result %	PO Attainment level
BAHU	B.A. Humanities (2020)	41	29	70.73	**3**
BSPSY	B.Sc. (Hons.) Psychology(2020)	6	6	100.00	**4**
BSM	B.Sc. Medical (2020)	2	2	100.00	**4**
BSNM	B.Sc Non-Medical (2020)	6	6	100.00	**4**
BSAG	B.Sc. (Hons.) Agriculture(2019)	60	60	100.00	**4**
BTFT	B.Tech. Food Technology (2019)	7	7	100.00	**4**
BAMU	B.A. (Hons.) Music (Gurmat Sangeet) (2020)	6	5	83.33	**4**
BAMU	B.A. (Hons.) Music (Instrumental) (2020)	15	14	93.33	**4**
BED	B.Ed. (2021)	48	48	100.00	**4**
BSEC	B.Sc. (Hons.) Economics (2020)	6	5	83.33	
BCOM	B.Com. (Hons.) (2020)	18	17	94.44	
BTCS	B.Tech. (CSE) (2019)	7	7	100.00	**4**
MSPSY	M.Sc. Psychology(2020)	3	3	100.00	**4**
MSCH	M.Sc. Chemistry (2020)	1	1	100.00	**4**
MSPHY	M.Sc. Physics (2020)	2	2	100.00	**4**
MAPUN	M.A. Punjabi (2020)	5	5	100.00	**4**
MAEN	M.A. English (2020)	2	2	100.00	**4**
MSBOT	M.Sc. Botany (2020)	4	4	100.00	**4**
MSMIC	M.Sc. Microbiology (2020)	3	3	100.00	**4**
MSZOO	M.Sc. Zoology (2020)	4	4	100.00	**4**
MAMU	M.A.Music (Instrumental)(2021)	2	2	100.00	**4**
MAMU	M.A.Music (Vocal)(2021)	4	4	100.00	**4**
MSAGN	M.Sc. Agronomy (2020)	7	7	100.00	**4**
MSBT	M.Sc. Biotechnology (2020)	4	4	100.00	**4**
MSFT	M.Sc. Food Technology (2020)	2	2	100.00	**4**
MSGPB	M.Sc. Genetics and Plant Breeding (2020)	2	2	100.00	**4**
MSHOT	M.Sc.Horticulture (2020)	2	2	100.00	**4**
MSAGE	M.Sc. Agri. Economics(2020)	1	1	100.00	**4**
MED	M.Ed (2020)	2	2	100.00	**4**
MBA	MBA (Finance) (2020)	3	3	100.00	**4**
MBA	MBA (Marketing) (2020)	1	1	100.00	**4**
MSN	M.Sc. Nursing (2020)	15	15	100.00	**4**
MPH	MPH (2020)	7	7	100.00	**4**
PSBT	PhD Biotechnology (2019)	2	2	100.00	**4**
PSCS	PhD CSE (2016)	1	1	100.00	**4**
PSCS	PhD CSE (2017)	1	1	100.00	**4**
PSFT	PhD Food Technology (2017)	2	2	100.00	**4**
PSFT	PhD Food Technology (2018)	2	2	100.00	**4**
PSZOO	PhD Zoology (2018)	1	1	100.00	**4**
BSN	B.Sc. Nursing	61	60	98.36	**4**
PSCOM	PhD Commerce (2017)	1	1	100.00	**4**