CHRIST NAGAR COLLEGE

A CMI Educational Institution

Affiliated to the University of Kerala

MARANALLOOR, THIRUVANANTHAPURAM

PROGRAMME OUTCOMES

PROGRAMME SPECIFIC OUTCOMES

COURSE OUTCOMES

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UNDER GRADUATE – BA, BCOM, BSC, BBA, BCA

PROGRAMME OUTCOME (PO)

On completion of a UG Programme from Christ Nagar College, students should be able to demonstrate the **programme outcomes** listed below:

PO1:PROFESSIONALISM AND ETHICS- Demonstrate accountability and professionalism that is rooted in ethical, altruistic, moral, and humanistic principles.

PO2:LEADERSHIP AND SOCIAL ACUITY - Capable of taking responsibilities as a leader and demonstrate responsiveness to the regional and national environments developing abilities to manage challenges for nation building.

PO3:DIGITAL COMPETENCE: Able to use technology and skills to process information and data for the benefit of the society.

PO4:COMMUNICATION AND TEAM WORK- Interact effectively with stakeholders, fostering an environment of team work, mutual respect and shared decision making skills.

PO5:CRITICAL THINKING - Foster in students an inquisitive mind to analyze and develop capacity to become an active leaner through critical thinking.

POST GRADUATE – MCOM, MA, MSC

PROGRAMME OUTCOME (PO)

On completion of a PG Programme from Christ Nagar College, students should be able to demonstrate the **programme outcomes** listed below:

PO1: RESEARCH AND QUALITY: Nurture research mind set through quality in thoughts and scientific temperament. Utilize systems to continuously improve the quality and standards.

PO2: BEST PRACTICES: Inculcate a mind set to seamlessly adopt innovation and entrepreneurship, assimilating best-practices for global excellence.

PO3: LIFELONG LEARNING- Develop skills and attitude for life-long learning and pursue self-directed learning for refining professional expertise

PO4: VISIONARY AND MISSION DRIVEN: Inspire stakeholders to pursue bigger visions through hard work, perseverance and managerial skills

PO5: GLOBAL OUTLOOK AND SOLUTIONS: Greater understanding of global problems to ideate and implement solutions

PROGRAMME SPECIFIC OUTCOME (PSO)

MCOM (ELECTIVE-FINANCE AND ACCOUNTING)

PSO1: **Apply** theoretical knowledge for career growth **(Apply)**

PSO2: **Solve** social problems using research, techniques and tools **(Create)**

PSO3: **Choose** the appropriate application of various laws including cyber law, industrial law, tax laws and economic laws in different situations. **(Evaluate)**

BCOM COMMERCE WITH COMPUTER APPLICATION UNDER 2(B)

PSO1: **Solve** problems using the theoretical and conceptual understanding in Commerce, Business Management, Accounting, Taxation and Computer Application by applying the technical and mathematical skills **(Apply)**

PSO2: **Develop** a sense of professional knowledge and skill in different areas of communication, entrepreneurship, programming and accounting **(Apply)**

PSO3: **Assess** different business phenomena and environment while engaging in research to nurture social responsibility and environmental consciousness **(Evaluate)**

BCOM COMMERCE AND TAX PROCEDURE AND PRACTICE UNDER 2(A)

PSO1: Solve problems using the basic understanding of laws in Commerce and Taxation and by applying the accounting, technical and mathematical skills **(Apply)**

PSO2: Develop skills in different areas of communication, entrepreneurship and management to work competently and productively in groups, exercising interpersonal skills**. (Apply)**

PSO3: Assess different business phenomena and environment while engaging in research to nurture social responsibility and environmental consciousness **(Evaluate)**

BBA

PSO1: **Solve** problems using the basic understanding of various principles and functional areas of management for developing new findings through research. **(Apply)**

PSO2: **Apply** entrepreneurial and managerial skills as well as knowledge regarding banking, information systems, legal aspects of business & e-business for effective business management. **(Apply)**

PSO3: **Develop** an organisation by knowing the business environment and be socially, ethically, and ecologically mindful. Improve the business communication and soft skills to advance to the management and administrative levels. Develop the business knowledge, analytical abilities, and financial literacy required to understand the dynamic nature of the business organization. **(Apply)**

MSC COMPUTER SCIENCE

PSO1: Develop Advanced Knowledge in Data structures, Computer Networks, Database Management Systems, Data Mining, Operating Systems, Information Security, Compiler Design, Distributed Systems and other related courses.**(Apply)**

PSO2: Use Mathematical and Optimization Techniques, Cloud Computing and thereby facilitating the students to develop computational problems**.(Apply)**

PSO3: Implement experiments for solving real life problems using advanced programming languages and prepare them for doing research**. (Apply)**

BCA

PSO1: Explain the concepts and architecture of computer systems; employ the aspects of environmental consciousness and social intervention **(Understand).**

PSO2: Apply mathematical tools and algorithmic techniques to solve computational problems **(Apply).**

PSO3: Develop software applications using the latest programming languages and technology in the emerging areas of computer applications and develop soft skills and analytical skills to compose innovative solutions and entrepreneurial ventures **(Apply).**

MA ENGLISH LANGUAGE & LITERATURE

PSO1: **Observe** the relationship between art and life to comprehend the social, emotional, psychological, political and cultural features of literary texts. **(Understand)**

PSO2: **Summarize** the basic pedagogical principles and praxis relating to the teaching of English language and literature **(Evaluate)**
PSO3: **Develop** the critical skills and theoretical knowledge necessary to work towards a research degree **(Create)**

BA ENGLISH LANGUAGE AND LITERATURE

PSO1: **Identify** the divergent and plural voices that come in to the making of the corpus of literary studies **(Understand)**

PSO2: **Develop** the requirements of the language use in a globalised context **(Apply)**

PSO3: **Analyse** and interpret the literary works in light of the literary theories and various philosophies **(Analyse)**

BSC PHYSICS & COMPUTER APPLICATIONS

PSO 1: Providing deep knowledge in Physics so that students are able to analyse and apply the knowledge of Physics in an innovative, dynamic and challenging environment for design and development of new products **(Understand, Apply)**.

PSO 2: Making students capable to solve practical, design and analysis problems to complete the challenge to fabricate, test and develop the products with more innovative technologies **(Analyse, Understand and Apply)**

PSO 3: Design solutions for complex Physics problems and design systems that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations **(Understand and apply)**.

BA JOURNALISM AND MASS COMMUNICATION

PSO1: Adapt different practices in Communication and Journalism **(Create)**

PSO2: Examine the theoretical underpinnings of the media practices **(Remember)**

PSO3: Produce content for different media platforms **(Apply)**

BSC MATHEMATICS

PSO1: **Apply** mathematical concepts in the field of differential and integral calculus, algebra, analysis, number theory and differential equations, **establish** mathematical expressions using software and **interpret** statistical and physical fields using mathematical concepts. **(Apply)**

PSO2: **Integrate** edified communication skills and critical thinking to examine and solve various societal problems and **develop** skills in the field of document making, mathematical computation, and visualization using software. **(Create)**

PSO3: Develop the knowledge in statistical and physical fields to enhance mathematical applications career prospects and **adapt** to the changing scientific environment, uphold scientific integrity, manage environmental emergencies and objectivity in professional endeavours. **(Create)**

BSC STATISTICS

PSO1: **Develop** communication skills to convey the concepts and applications of Statistics for the holistic development of society upholding the principles of sustainable development and environmental consciousness. **(Apply)**

PSO2: **Apply** statistical techniques for collection, presentation, analysis and interpretations of data and draw valid inferences,Develop programming skill to analyze data using statistical softwares.**(Apply)**

PSO3: **Describe** Statistical methods applied to study Demographic, Industrial and Economic patterns and behaviour and also integrate theoretical knowledge and skills to develop new ideas in the field of research and real life situations.**(Understand)**

COURSE OUTCOMES

DEPARTMENT OF COMMERCE

MCOM (ELECTIVE-FINANCE AND ACCOUNTING)

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CO 211	**BUSINESS ETHICS AND CORPORATE GOVERNANCE**	CO1	**Discuss** the various components of business environment (**Understand**)
		CO2	**Explain** the theories of Business Ethics and organisational culture (**Understand)**
		CO3	**Apply** corporate governance practices in companies (**Apply**)
		CO4	**Evaluate** CSR initiatives and Practices of business organisations(**Analyze)**
		CO5	**Manage** corporate image and excellence of business entreprises (**Create**)
CO 212	**LEGAL FRAMEWORK FOR BUSINESS**	CO1	**Summarize** the basic legal formalities for incorporation and functioning of a company**(Evaluate)**
		CO2	**Explain** the concept, formation, functioning and dissolution of Limited Liability Partnership firms **(Apply)**
		CO3	**Describe** the concepts in economic laws with respect to competition and foreign trade **(Understand)**
		CO4	**Illustrate** the laws pertaining to the development and regulation of Industries including MSMEs **(Analyze)**
		CO5	**Discuss** the management and regulation of Foreign Exchange transactions and Foreign contributions. **(Understand)**
CO 213	**RESEARCH METHODOLOGY**	CO1	**Describe** an insight into the fundamentals of social science research**(Remember)**
		CO2	**Explain** the need, significance and relevance of research **(Understand)**
		CO3	**Facilitate** the students to formulate a good research design **(Create)**

		CO4	**Develop** practical knowledge and required skills in carrying out research **(Apply)**
		CO5	**Prepare** the students to draft research proposals **(Create)**
CO214	**PLANNING AND DEVELOPMENT ADMINISTRATION**	CO1	**Define** and enumerate sectors of economy (**Remember**)
		CO2	**Explain** and interpret the functionalities in the economic system. **(Remember)**
		CO3	**Identify** and judge the economy **(Understand)**
		CO4	**Generalize** and distinguish between the sources and applications of funds in the economy **(Understand)**
		CO5	**Compare** and evaluate the types of economies **(Analyze)**
CO 215	**ADVANCED CORPORATE ACCOUNTING AND REPORTING**	CO1	**Identify** the accounting standards **(Understand)**
		CO2	**Analyze** claims to be lodged **(Analyze)**
		CO3	**Analyze** investment account **(Analyze)**
		CO4	**Analyze** and evaluate the advanced accounting treatments and practices **(Analyze)**
		CO5	**Analyze** the various financial statements of companies **(Understand)**

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CO 221	**E BUSINESS AND CYBER LAWS**	CO1	**Discuss** the basic concepts and design of E-Business **(Understand)**
		CO2	**Identify** the emerging trends inE-Marketing **(Understand)**
		CO3	**Explain** the use of Information technology in all aspects of business **(Apply)**
		CO4	**Extend** the knowledge on cyber laws and IPR **(Understand)**

		CO5	**Describe** the various aspects of cyber regulations and cyber crimes **(Understand)**
CO 222	**STRATEGIC MANAGEMENT**	CO1	**Describe** conceptual framework on various strategies. **(Understand)**
		CO2	**Identify** formulation of strategies. **(Understand)**
		CO3	**Explain** the implementation and evaluation of strategies. **(Understand)**
		CO4	**Identify** various analysis techniques to scan the internal and external environment. **(Understand)**
		CO5	**Analyze** different case studies in national and international context. **(Analyze)**
CO 223	**QUANTITATIVE TECHNIQUES AND FINANCIAL ECONOMETRICS**	CO1	**Discuss** the concept of probability theory (**Understand**)
		CO2	**Explain** the characteristics of probability distributions (**Apply**)
		CO3	**Describe** the concepts of Financial Econometrics (**Understand**)
		CO4	**Discuss** the concepts of Univariate and Multivariate Analysis **(Understand)**
		CO5	**Analyse** the statistical data using SPSS **(Analyze)**
CO224	**INTERNATIONAL BUSINESS**	CO1	**Identify** the concept of international business **(Understand)**
		CO2	**Identify** the various international theories **(Remember)**
		CO3	**Explain** the concept, formation and functioning of international laws **(Apply)**
		CO4	**Illustrate** illustrate multilateral agreement and institutions **(Understand)**
		CO5	**Analyze** MNCs **(Analyze)**
CO 225	**INVESTMENT MANAGEMENT**	CO1	**Describe** and illustrate the Investment opportunities to students **(Understand)**
		CO2	**Explain** various financial principles **(Understand)**
		CO3	**Develop** and review various personal finance opportunities **(Apply)**
		CO4	**Identify** behavioral finance **(Understand)**
		CO5	**Describe** technology to reframe the investment channels **(Apply)**

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CO 231U	**INCOME TAX PLANNING AND MANAGEMENT**	CO1	**Understand** the basic concepts of tax planning (**Understand**)
		CO2	**Create** deep knowledge about the latest provisions of Income Tax Act (**Create**)
		CO3	**Develop** application and analytical skill of the provisions of Income tax law for Income tax planning and management (**Create)**
		CO4	**Develop** and collaborate tax planning measures in day to day life situations (**Create)**
		CO5	**Compute** and illustrate self assessment, financial assessment and company assessment (**Apply)**
CO 232F	**SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT**	CO1	**Explain** the dimensions of fundamental analysis such as analysis of economy wide, industry wide and company wide factors. **(Understand)**
		CO2	**Interpret** chart patterns and trends by using the tools of technical analysis **(Apply)**
		CO3	**Determine** the intrinsic value of shares and bonds with the help of various share and bond valuation models. **(Apply)**
		CO4	**Calculate** the risk and return of individual securities and portfolios using traditional and modern approaches. **(Analyze)**
		CO5	**Explain** in detail the modern portfolio theory, portfolio revision and portfolio evaluation **(Understand)**
CO233F	**INTERNATIONAL FINANCIAL MANAGEMENT**	CO1	**Understand** the basic concepts of international finance **(Understand)**
		CO2	**Describe** exchange risk management **(Understand)**
		CO3	**Explain** the concepts of financial instruments **(Understand)**
		CO4	**Explain** international investment decisions**(Understand)**
		CO5	**Examine** various International financial instruments **(Remember)**

CO 234F	**STRATEGIC COST AND MANAGEMENT ACCOUNTING**	CO1	**Recognize** the various terms and concepts in cost accounting **(Remember)**
		CO2	**Apply** various techniques of costing in decision Making **(Apply)**
		CO3	**Prepare** cost accounts based on the costing system applied **(Analyse)**
		CO4	**Explain** application of various types of modern cost techniques **(Understand)**
		CO5	**Distinguish** strategic approaches and techniques**(Evaluate)**

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CO 241W	**GOODS AND SERVICE TAX & CUSTOMS DUTY- LAW AND PRACTICE**	CO1	**Identify** indirect taxes in India **(Remember)]**
		CO2	**Compute** various taxes **(Apply)**
		CO3	**Valuate** GST and customs duty **(Analyze)**
		CO4	**Compare** the structure of GST and customs duty **(Understanding]**
		CO5	**Combine** and manage the provisions of GST **(Create)**
CO 242F	**RISK MANAGEMENT AND DERIVATIVES**	CO1	**Generalize** the risk management process and its application **(Understand)**
		CO2	**Explain** various derivatives dealt in stock exchange **(Understand)**
		CO3	**Explain** various theories of valuing derivatives (**Understand**)
		CO4	**Compute** Value of derivatives **(Apply)**
		CO5	**Discuss** accounting practices for derivatives **(Understand)**

CO 244S	**MANAGEMENT OPTIMIZATION TECHNIQUES MANAGEMENT OPTIMIZATION TECHNIQUES**	CO1	**State** basic principles and application of optimization tools of resource utilization (**Understand**)
		CO2	**Describe** various operations research models and its importance in business decision **(Understand)**
		CO3	**Compute** and develop the game theory and payoff matrix **(Apply)**
		CO4	**Observe** and explain the factors relating to Replacement theory **(Understand)**
		CO5	**Schedule** the project and determine Network analysis**(Apply)**
CO 243F	**ACCOUNTING STANDARDS**	CO1	**Extend** the knowledge regarding the accounting standards in detail (**Understand)**
		CO2	**Analyse** the application of various accounting standards **(Analyze)**
		CO3	**Differentiate** between Indian Accounting standards and International Accounting standards. **(Analyze)**
		CO4	**Develop** a better understanding among the accounting standards and its importance. **(Understanding)**
		CO5	**Examine** fundamental concepts of accounting practices in India.**(Apply)**

BCOM COMMERCE WITH COMPUTER APPLICATION UNDER 2(B)

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1111.2	**LANGUAGE SKILLS**	CO1	**Define** the tenets of Soft skills and the four fold skills. **(Remember)**
		CO2	**Explain** elements of basic communication through micro and macro skills **(Understand)**
		CO3	**Develop** conversational skills through dialogue writings. **(Apply)**
		CO4	**Analyse** the students' ability as a critical reader and writer. **(Analyze)**
		CO5	**Create** expertise in business and professional writing to endorse employability. **(Create)**
CC1141	**INTRODUCTION TO INFORMATION TECHNOLOGY**	CO1	**Explain** the basic concepts of Information Technology. **(Understand)**

		CO2	**Extend** knowledge on different units of computer. **(Understand)**
		CO3	**Discuss** the various types of hardware and software of computer. **(Understand)**
		CO4	**Identify** the modern digital technologies like social Medias, digital banking, mobile operating system etc.**(Understand)**
		CO5	**Distinguish** between the different number systems and conversion from one system to another **(Analyze)**
CC1121	**METHODOLOGY AND PERSPECTIVES OF BUSINESS EDUCATION**	CO1	Explain the concept of economic system, business entities and economic sectors. **(Understand)**
		CO2	Discuss the role of business in Economic Development (**Understand**)
		CO3	**Explain** the role of trained manpower and technology in promoting ethical practices in business **(Understand)**.
		CO4	**Observe** the concept of Social ethics, social responsibility and social service (**Remember**)
		CO5	**Express** holistic, comprehensive and integrated perspective to business education (**Understand**)
CC1142	**ENVIRONMENTAL STUDIES**	CO1	**Explain** the basic concepts and emerging issues about the environment **(Understand)**.
		CO2	**Discuss** the role of an individual in the protection of the biodiversity and the environment **(Understand)**.
		CO3	**Determine** the causes of pollution and solutions to deal with it **(Apply)**.
		CO4	**Propose** solutions to maintain sustainable development **(Create)**
		CO5	**Construct** an idea about population explosion, its impact and Human rights in our economy**(Create)**
CO 1142	**MANAGEMENT CONCEPTS AND THOUGHT**	CO1	**Describe** different dimensions of management and its process **(Remember)**
		CO2	**Compare** different leadership styles and theories **(Understand)**
		CO3	**Compare** different motivation theories applying in Business **(Understand)**
		CO4	**Describe** communication models in Business **(Understand)**
		CO5	**Explain** various contemporary techniques of management like TQM, change management and learning organization (**Understand)**
CO1131	**MANAGERIAL ECONOMICS**	CO1	**Explain** the basic concepts related to the application of Economic theories, tools and methodologies in business decision making. (**Understand)**
		CO2	**Describe** the types, elasticity and methods of forecasting the demand.**(Understand)**

		CO3	**Discuss** the theoretical concepts of production and business cycle (**Understand)**
		CO4	**Differentiate** the various forms of market and price determination under various market conditions (**Understand)**
		CO5	**Determine** the causes of business cycle(**Apply)**

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1211.4	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises. **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests. **(Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. **(Create)**
CC1241	**FINANCIAL MANAGEMENT**	CO1	**Discuss** the meaning, scope and key decisions of financial management. **(Understand)**
		CO2	**Explain** the concept of cost of capital, capital structure and theories of capital structure. **(Understand)**
		CO3	**Describe** the capital budgeting decision and management of working capital. **(Understand)**
		CO4	**Explain** the dividend policies and theories of dividend policies. **(Understand)**
		CO5	**Compute** the working capital requirement of an organisation**(Apply)**
CO 1221	**INFORMATICS AND CYBER LAWS**	CO1	**Review** the basic concepts and fundamental knowledge in the field of informatics **(Understand)**

		CO2	**Create** awareness about the nature of the emerging digital knowledge society and the impact of informatics on business decisions. **(Create)**
		CO3	**Create** awareness about the cyber world and cyber regulations**.(Create)**
		CO4	**Create** awareness about the Cyber Laws**.(Create)**
		CO5	**Create** awareness about network and Security**.(Create)**
CC1242	**FINANCIAL ACCOUNTING**	CO1	**Compute** the financial position of a sole trader. **(Apply)**
		CO2	**Analyze** the books of account of hire purchasing system**(Analyze)**
		CO3	**Evaluate** the accounts of voyage, package and container system**(Analyze)**
		CO4	**Appraise** investment accounts (**Evaluate)**
		CO5	**Analyze** claims to be lodged in case of insurance claim **(Analyze)**
CC1243	**BUSINESS REGULATORY FRAMEWORK**	CO1	**Describe** the basic concepts, terms and provisions of Business Law.**(Remember)**
		CO2	**Identify** the essential elements of a contract.**(Understand)**
		CO3	**Distinguish** between bailment and pledge and idemnity and guarantee.**(Analyze)**
		CO4	**Prepare** a model of Right to Information application for obtaining information under RTI Act ,2005.**(Create)**
		CO5	**Explain** the various IPR related laws prevailing in our country (**Apply**)
CC1231	**BUSINESS MATHEMATICS**	CO1	**Illustrate** fractions, mixed numbers, permutations, combinations **(Apply)**
		CO2	**Practice** Matrices, determinants, linear and quadratic equations, differentiation and integration and their operations. **(Apply)**
		CO3	**Explain** set theory, bar and pie diagram, Cramer's rule, extrapolation and interpolation with line graphs. **(Apply)**
		CO4	**Understand** Mathematical application in

			Business **(Understand)**
		CO5	**Prepare** Financial Statement Analysis.**(Apply)**

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CC 1341	**PROJECT FINANCE**	CO1	**Formulate** the patterns of project financing **(Create)**
		CO2	**Record** the financial techniques for project appraisal **(Understand)**
		CO3	**Estimate** the risk associated in the project implementation **(Analyze)**
		CO4	**Formulate** the patterns of project financing **(Create)**
		CO5	**Estimate** the issues faced in global project **(Analyze)**
CC 1342	**ENTREPRENEURSHIP DEVELOPMENT**	CO1	**Explain** the concept of entrepreneur, entrepreneurship and also show the fundamental aspects of entrepreneurship **(Understand)**
		CO2	**Explain** the latest programmes of Government in promoting small and medium industries **(Apply)**
		CO3	**Prepare** a project report and basic principles to create a good project report **(Apply)**
		CO4	**Organize** the knowledge to start own new ventures **(Analyze)**
		CO5	**Identify** the procedure associated with initiating an entrepreneurial activity **(Understand)**
CC 1343	**ADVANCED FINANCIAL ACCOUNTING**	CO1	**Prepare** accounts related to dissolution of partnership firms. **(Apply)**
		CO2	**Solve** the problems in consignment accounts. **(Apply)**
		CO3	**Prepare** accounts of joint venture business. **(Apply)**
		CO4	**Illustrate** the system of accounting for different branches. **(Apply)**

		CO5	**Assess** and illustrate the accounting for departments**(Apply)**
CC 1344	**COMPANY ADMINISTRATION**	CO1	**Examine** the salient provisions of Indian Companies Act 2013 **(Remember)**
		CO2	**Analyze** the functions and responsibilities of Board of Directors **(Analyze)**
		CO3	**Describe** the affairs of the company and winding up procedure **(Understand)**
		CO4	**Prepare** a report compiling all the essential documents needed at various stages of the formation of a Public Limited Company **(Create)**
		CO5	**Compare** the provisions of Company Act 1956 and 2013 **(Evaluate)**
CC1345	**COMPUTER APPLICATION FOR PUBLICATION**	CO1	**Explain** the functional knowledge in the field of free software **(Understand)**
		CO2	**Illustrate** the various operations in Microsoft Word **(Apply)**
		CO3	**Develop** practical skills on advanced uses of Microsoft Word **(Apply)**
		CO4	**Design** pages in Desktop Publishing Software **(Create)**
		CO5	**Create** business presentation using Microsoft Powerpoint **(Create)**
CC 1331	**E BUSINESS**	CO1	**Explain** the basic concepts of E-Business and E-Commerce and also their types and models. **(Understand)**
		CO2	**Describe** about some of the innovative E Business Systems. **(Remember)**
		CO3	**Create** an idea about various areas of E business applications and E Governance. **(Create)**
		CO4	**Describe** about various E-Business initiatives taken from the side of government **(Understand)**
		CO5	**Develop** knowledge on the basics of starting online business **(Create)**

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CC 1441	**FINANCIAL SERVICES IN**	CO1	**Create** an idea about financial services in India **(Create)**

	INDIA		
		CO2	**Analyze** functioning of fund based and fee financial services in India **(Analyze)**
		CO3	**Discover** various the pros and cons of financial services presently available in India **(Apply)**
		CO4	**Develop** a sense among using Financial Services in real life situations **(Apply)**
		CO5	**Develop** the knowledge about various financial services available for starting a functioning of a business (**Create)**
CC 1444	**CORPORATE ACCOUNTING**	CO1	**Create** an idea about the international accounting principles and procedures **(Create)**
		CO2	**Analyse** the accounting procedures followed by different corporate entities in India **(Analyze)**
		CO3	**Explain** the accounting procedures and different books of accounts maintained by different corporate entities in India **(Analyze)**
		CO4	**Combine** the theory and applications level to understand the procedures practice and principles in the branch of accounting **(Apply)**
		CO5	**Understand** various accounting standards and its applications**(Apply)**
CO1442-	**BANKING AND INSURANCE**	CO1	**Discuss** the functions of commercial Banks and Central Banks . **(Understand)**
		CO2	**Explain** Banking practices and Banker customer relationship **(Apply)**
		CO3	**Describe** Innovations and reforms in banking sector (**Understand**)
		CO4	**Explain** the basics of Insurance Business. (**Apply**)
		CO5	**Evaluate** Insurance claims and regulations. (**Analyze**)
CC 1431 -	**BUSINESS STATISTICS**	CO1	**Understand** statistical techniques those are applicable to business.**(Understand)**
		CO2	**Persuade** students in applying statistical techniques in business problem solving (**Evaluate)**
		CO3	**Evaluate** correlation and regression analysis (**Analyze)**

		CO4	**Calculate** the indices to measure price and quantity changes over period of time **(Analyze)**
		CO5	**Practice** time series in an informative way both graphically and with summary statistics **(Apply)**
CC 1442 -	**INDIAN FINANCIAL MARKET**	CO1	**Describe** the functioning of Indian Financial Market in general and Capital market operations in particular.**(Understand)**
		CO2	**Explain** different types of dealings in Indian financial market **(Understand)**
		CO3	**Explain** different methods of hedging risk using derivative instruments **(Understand)**
		CO4	**Explain** the regulations of Indian Financial Market **(Understand)**
		CO5	**Develop** an idea of working of the securities markets and its components **(Create)**
CC 1445	**SOFTWARE FOR DATA MANAGEMENT**	CO1	**Explain** the basics of Software for Data Management **(Understand)**
		CO2	**Prepare** the students to meet the demands of the industry. **(Apply)**
		CO3	**Develop** practical skills on advanced uses of Microsoft Excel **(Apply)**
		CO4	**Develop** theoretical and technical expertise in statistical software SPSS **(Apply)**
		CO5	**Create** databases and queries using Microsoft Access **(Create)**

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CC 1541	**FUNDAMENTALS OF INCOME TAX**	CO1	**Discuss** the Basic Concepts and Definitions of Income Tax Act. **(Understand)**
		CO2	**Describe** the provisions relating to Computation of Income from Salaries. **(Understand)**
		CO3	**Explain** the computation of Income from House Property. (**Apply**)
		CO4	**Illustrate** computation of Profits and Gains of Business or Profession, Capital Gains and Income from Other Sources **(Analyze)**

		CO5	**Explain** the Computation of Tax Liability of Individual Assessee (**Analyze**)
CC 1542	**COST ACCOUNTING**	CO1	**Make** students explain various cost and cost accounting concepts **(Analyze)**
		CO2	**Assess** the cost of various elements of cost such as Material, Labour and Overheads **(Evaluate)**
		CO3	**Differentiate** Cost and Financial accounting systems **(Analyze)**
		CO4	**Prepare** Cost Sheet and Reconciliation Statement **(Create)**
		CO5	**Examine** the application of cost accounting, financial accounting and management accounting in business organisations.**(Apply)**
CC 1543	**MARKETING MANAGEMENT**	CO1	**Recall** the knowledge of various concepts of modern marketing management **(Remember)**
		CO2	**Explain** the contemporary marketing process in the emerging business scenario**(Understand)**
		CO3	**Describe** various aspects of application of modern marketing techniques for obtaining a competitive advantages in business organisation **(Understand)**
		CO4	**Describe** various aspects of consumer behaviour **(Understand)**
		CO5	**Apply** advertising techniques in marketing **(Apply)**
CC 1551	**PRINCIPLES OF MANAGEMENT**	CO1	**Discuss** the fundamentals of management and the importance of related concepts. **(Understand)**
		CO2	**Explain** in detail about the role of principles of management in the decision making process of an organisation. **(Understand)**
		CO3	**Describe** the significance of the management process of planning, organising, staffing, directing & controlling. **(Understand)**
		CO4	**Describe** the different sources of recruitment and selection **(Understand)**
		CO5	**Discuss** the theoretical framework of the different aspects of Management Principles. **(Understand)**

CC 1544	**WEB DESIGNING AND PRODUCTION FOR BUSINESS**	CO1	**Describe** the procedure of designing and developing a web site**(Understand)**.
		CO2	**Explain** the basic functional knowledge of tags in Web designing**(Understand)**
		CO3	**Determine** the various advanced features in web designing**(Apply)**.
		CO4	**Explain** the concepts of CSS and XML**(Understand)**.
		CO5	**Design** a website using the basic and advanced tags in HTML with the help of CSS and XML **(Create)**
CC 1545	**WEB DESIGNING AND PRODUCTION FOR BUSINESS-LAB**	CO1	**Develop** practical skill to design a simple web page**(Create)**.
		CO2	**Design** a complete web site using different tags in HTML. **(Create)**
		CO3	**Apply** CSS in web pages in an effective manner **(Apply)**
		CO4	**Create** a blog using XML **(Create)**
		CO5	**Design** a website using XML and XSL **(Create)**

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CC 1642	**APPLIED COSTING**	CO1	**Recognise** important terms and concepts of Applied Costing **(Remember)**
		CO2	**Distinguish** various costing methods and techniques **(Evaluate)**
		CO3	**Prepare** Cost statements as per various systems of cost accounting **(Apply)**
		CO4	**Solve** problems associated with various Costing methods and techniques **(Create)**
		CO5	**Justify** the application of various methods and techniques in a situation **(Create)**
CC 1644	**COMPUTERISED ACCOUNTING**	CO1	**Create** the skills in the application of accounting packages **(Create)**
		CO2	**Explain** the computer applications in the field of Accounting **(Understand)**
		CO3	**Develop** practical knowledge in the application of Tally Package **(Apply)**
		CO4	**Explain** about the various reports that can be

			generated with the help of Tally software. **(Analyze)**
		CO5	**Determine** the various uses of Computer Softwares in the field of accounting **(Apply)**
CC 1645	**COMPUTERISED ACCOUNTING LAB**	CO1	**Develop** the skills in the application of Tally in recording accounting transactions **(Apply)**
		CO2	**Explain** about the treatment of inventory related informations in tally software and generating stock summary**(Understand)**
		CO3	**Create** a knowledge in the preparation of Bank Reconciliation statements in Tally.**(Create)**
		CO4	**Prepare** the financial statements of a sole trading business concern in Tally **(Create)**
		CO5	**Record** the GST, Budgeting and stock related informations in accounting by using Tally **(Apply)**
CC 1641	**AUDITING**	CO1	**Discuss** the various types of audit, Audit Process and documentation (**Understand**)
		CO2	**Explain** the Vouching and Verification. **(Apply)**
		CO3	**Explain** the provisions in the Companies Act regarding Auditors of Joint Stock Companies. **(Understand)**
		CO4	**Describe** the investigation and types of investigation.**(Understand)**
		CO5	**Compare** verification and valuation of assets in an organisation**(Apply)**
CC 1643	**MANAGEMENT ACCOUNTING**	CO1	**Recognise** important terms and concepts of Management Accounting**(Remember)**
		CO2	**Develop** practical knowledge in the preparation of various budgets **(Apply)**
		CO3	**Prepare** Fund Flow Statement as per systems of management accounting **(Apply)**
		CO4	**Prepare** Cash Flow Statement as per systems of management accounting **(Apply)**
		CO5	**Solve** problems associated with various Management accounting techniques **(Create)**
CC 1651.2	**STRATEGIC MANAGEMENT**	CO1	**Give** basic understanding about the concepts related to strategic management. **(Understand)**
		CO2	**Appraise** the students with the managerial tasks associated with implementing

			corporate strategy. **(Evaluate)**
		CO3	**Facilitate** the students to use different strategies for organizational appraisal and environmental scanning **(Create)**
		CO4	**Apply** SWOT and TOWS analysis to identify the organizational strength, weakness, opportunities and threats of the organization **(Apply)**
		CO5	**Analyze** different case studies in national and international context. **(Analyze)**

BCOM TAX PROCEDURE AND PRACTICE

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1111.1	**LANGUAGE SKILLS**	CO1	**Define** the tenets of Soft skills and the four fold skills. **(Remember)**
		CO2	**Explain** elements of basic communication through micro and macro skills **(Understand)**
		CO3	**Develop** conversational skills through dialogue writings. **(Apply)**
		CO4	**Analyse** the students' ability as a critical reader and writer. **(Analyze)**
		CO5	**Create** expertise in business and professional writing to endorse employability. **(Create)**
ML1111.3	**ADDITIONAL LANGUAGE**	CO1	**Identify** major literary figures in Malayalam literature **(Remember)**
		CO2	**Compare** the characteristics of novel and short story(**Understand**)
		CO3	**Explain** various genres of Malayalam prose writing(**Understand**)
		CO4	**Choose** correct usage of vocabulary(**Apply**)
		CO5	**Analyze** social life through the study of personal history (**Analyze**)
HN 1111.4	**COURSE ADDITIONAL LANGUAGE COURSE**	CO1	**Discover** the aesthetics of modern Hindi poetry (**Understand**)
		CO2	**Report** the main works of prescribed poets and prose writers (**Understand**)

		CO3	**Judge** the contributions of prescribed writers (**Apply**)
		CO4	**Interpret** the development of Hindi prose writing (**Understand**)
		CO5	**Appraise** the craft used in different genres of prescribed writers (**Analyze**)
CX 1121	**METHODOLOGY AND PERSPECTIVES OF BUSINESS EDUCATION**	CO1	**Explain** the concept of economic system, business entities and economic sectors. **(Understand)**
		CO2	**Discuss** the role of business in Economic Development **(Understand)**
		CO3	**Explain** the role of trained manpower and technology in promoting ethical practices in business **(Understand)**
		CO4	**Express** holistic, comprehensive and integrated perspective to business education **(Understand)**
		CO5	**Observe** the concept of Social ethics, social responsibility and social service **(Remember)**
CX 1141	**ENVIRONMENTAL STUDIES**	CO1	**Explain** the basic concepts and emerging issues about the environment (**Understand**).
		CO2	**Discuss** the role of an individual in the protection of the biodiversity and the environment (**Understand**).
		CO3	**Determine** the causes of pollution and solutions to deal with it (**Apply**).
		CO4	**Propose** solutions to maintain sustainable development (**Create**)
		CO5	**Construct** an idea about population explosion, its impact and Human rights in our economy(**Create**)
CX 1171	**PRINCIPLES OF TAXATION**	CO1	**Identify** the sources of public revenue and will get adapted to the terms of taxation(**Remember**)
		CO2	**Discuss** the transformation of taxation from past to present and the basic concepts of taxation. (**Understand**)
			Describe the cannons and recognize the relevancy of taxable capacity. (**Understand**)
			Observe the constitutional provisions relating to taxation correlate the Sections and Acts relevant to tax. (**Understand**)
			Calculate the Income Tax Liability (**Analyze**)
CX 1131	**MANAGERIAL**	CO1	**Explain** the basic concepts related to the application

	ECONOMICS		of economic theories, tools and methodologies in business decision making. (**Understand**)
		CO2	**Describe** the types, elasticity and methods of forecasting the demand.(**Understand**)
		CO3	**Discuss** the theoretical concepts of production (**Understand**)
		CO4	**Differentiate** the various forms of market and price determination under various market conditions (**Understand**)
		CO5	**Explain** the theoretical concepts of business cycles (**Understand**)

SEMESTER 2

COURSE CODE	**COURSE NAME**	**COURSE OUTCOME**	
EN 1211	**ENGLISH II**	CO1	**Identify** grammatical items and sentence structures of English grammar. (**Remember**)
		CO2	**Change** sentences using basic rules of English grammar. (**Apply**)
		CO3	**Test** grammatical competence at application level. (**Analyze**)
		CO4	**Find** errors in sentences and correct them **(Evaluate)**
		CO5	**Develop** writing skills for special purposes and academic writing. (**Create**)
ML 1211.3	**ADDITIONAL LANGUAGE –II MALAYALAM**	CO1	**Identify** major visual art forms of kerala (**Remember**)
		CO2	**Compare** the characteristics of attakkadha and thullal (**Understand**)
		CO3	**Explain** various genres of Malayalam drama (**Understand**)
		CO4	**Explain** the development of screenplay (**Apply**)
		CO5	**Analyze** social life through the study of personal history (Analyze**)**
HN 1211.4	**HINDI NATAK,VYAVASAYIK LEKHAN AUR ANUVAAD**	CO1	**Recollect** the works of playwright (**Remember)**
		CO2	**Analyze** the craft and relevance of the play in modern times(**Analyze**)
		CO3	**Illustrate** the craft in business letters and importance of translation (**Apply**)
		CO4	**Observe** the terms of official language in Hindi (**Remember**)

		CO5	**Observe** the method of translation in Hindi to English and English to Hindi (**Understand**)
CX 1221	**INFORMATICS AND CYBER LAW**	CO1	**Review** the basic concepts and fundamental knowledge in the field of informatics **(Understand)**
		CO2	**Create** awareness about the nature of the emerging digital knowledge society and the impact of informatics on business decisions. **(Create)**
		CO3	**Create** awareness about the cyber world and cyber regulations**.(Create)**
		CO4	**Create** awareness about the Cyber Laws**.(Create)**
		CO5	**Create** awareness about network and Security**.(Create)**
CX 1241	**FINANCIAL ACCOUNTING**	CO1	**Compute** the financial position of a Sole Trader. (**Apply**)
		CO2	**Describe** various methods for charging depreciation in a concern, (**Understand**)
		CO3	**Analyze** the books of accounts of Hire Purchase System. (**Analyze**)
		CO4	**Estimate** the accounts of Voyage, Package and Containers system. (**Evaluate**)
		CO 5	**Appraise** the Investment Accounts and Insurance Claims. (**Evaluate**)
CX 1271	**INCOME TAX LAW AND PRACTICE**	CO1	**Determine** of Residential status and Total Income(**Apply**)
		CO2	**Explain** the Exempted Incomes and its different categories (**Understand**)
		CO3	**Illustrate** the concept of Income salaries and its computation (**Understand**)
		CO4	**Examine** the importance of gratuity, pension, provident fund and its tax treatment (**Apply**)
		CO5	**Compute** Income from house property(**Analyze**)
CO 1231	**BUSINESS MATHEMATICS**	CO1	**Illustrate** fractions, mixed numbers, permutations, combinations (**Apply**)
		CO2	**Practice** Matrices, determinants, linear and quadratic equations, differentiation and integration and their operations. (**Apply**)
		CO3	**Explain** set theory, bar and pie diagram, Cramer's rule, extrapolation and interpolation with line graphs. (**Apply**)
		CO4	**Understand** Mathematical application in Business (**Understand**)
		CO5	**Prepare** Financial Statement Analysis.(**Apply**)

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1311.3	**ENGLISH III**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests. **(Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. **(Create)**
CX 1341	**MANAGEMENT CONCEPTS AND THOUGHTS**	CO1	**Describe** different dimensions of management and its process (**Remember**)
		CO2	**Compare** different leadership styles and theories (**Understand**)
		CO3	**Compare** different motivation theories applying in Business(**Understand**)
		CO4	**Describe** communication models in Business (**Understand**)
		CO5	**Explain** various contemporary techniques of management like TQM, change management and learning organization **(Understand)**
CX 1342	**ADVANCED FINANCIAL ACCOUNTING**	CO1	**Prepare** accounts related to dissolution of partnership firms. **(Apply)**
		CO2	**Solve** the problems in consignment accounts. **(Apply)**
		CO3	**Prepar**e accounts of joint venture business. **(Apply)**
		CO4	**Illustrate** the system of accounting for different branches.**(Apply)**
		CO5	**Prepare** departmental accounts of business firms **(Apply)**
CX 1371	**INCOME TAX LAW AND PRACTICE II**	CO1	**Identify** the fundamentals aspects of Income tax **(Remember)**

		CO2	**Distinguish** the various heads of income **(Understand)**
		CO3	**Compute** Income from Capital gains and other sources **(Apply)**
		CO4	**Explain** the various provisions relating to income tax **(Analyze)**
		CO5	**Assess** Total income taxable **(Apply)**
CX 1372	**RECOVERY AND REFUND OF INCOME TAX**	CO1	**Explain** the basic concept of the Income Tax recovery and Refund (**Understand**)
		CO2	**Administer** the application of technology on Income tax assessment.(**Apply**)
		CO3	**Illustrate** the concepts and procedure of Income Tax Assessment.(**Understand**)
		CO4	**Convince** the functioning of Income Tax Administrative mechanism (**Evaluate**)
		CO5	**Describe** advantages of the present system of tx administration with the old ones (**Remember**)
CX 1331	**E BUSINESS**	CO1	**Explain** the basic concepts of E-Business and E-Commerce and also their types and models. (**Understand**)
		CO2	**Describe** some of the innovative E Business Systems. (**Remember**)
		CO3	**Describe** about various E-Business initiatives taken from the side of government (**Understand**)
		CO4	**Create** an idea about various areas of E business applications and E Governance. (**Create**)
		CO5	**Develop** knowledge on the basics of starting an online business. (**Create**)

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CX 1441	**BUSINESS REGULATORY FRAMEWORK**	CO1	**Discuss** the brief idea about the framework of Indian Business Law (**Understand**)
		CO2	**Explain** various Business Laws prevailed in India (**Analyze**)

		CO3	**Develop** provisions of business laws and business activities within the minds of students (**Apply**)
		CO4	**Describe** various regulatory authorities prevailed in connection with business law (**Understand**)
		CO 5	**Explain** the various IPR related laws prevailing in our country (**Apply**)
CX 1471	**INCOME TAX ASSESSMENT–I**	CO1	**Identify** various returns of Income tax **(Remember)**
		CO2	**Distinguish** the various types of Assessments **(Understand)**
		CO3	**Compute** Incomes of Persons under income tax **(Apply)**
		CO4	**Explain** the various provisions relating to filing of income tax **(Analyse)**
		CO5	**Assess** Total income taxable **(Apply)**
EN1411.1	**READING IN LITERATURE**	CO1	**Identify** the style and literary devices employed in poetry. (**Remember**)
		CO2	**Critique** the works prescribed for study. (**Evaluate**)
		CO3	**Analyze** literature as a cultural phenomenon. (**Analyze**)
		CO4	**Develop** novel interpretations using critical thinking. (**Create**)
		CO5	**Develop** an appreciation of literary discourse **(Apply)**
Cx 1442	**BANKING AND INSURANCE**	CO1	**Discuss** the functions of commercial Banks and Central Banks . **(Understand)**
		CO2	**Explain** Banking practices and Banker customer relationship **(Apply)**
		CO3	**Describe** Innovations and reforms in banking sector (**Understand**)
		CO4	**Explain** the basics of Insurance Business. (**Apply)**
		CO5	**Evaluate** Insurance claims and regulations. (**Analyze**)
CX 1472	**INCOME TAX ASSESSMENT–II**	CO1	**Discuss** the brief idea about the framework of Income tax Assessment (**Understand**)
		CO2	**Explain** the assessment of different types of institutions (**Apply**)
		CO3	**Develop** a concrete idea regarding income tax assessment and it's procedure in the minds of the students (**Create**)

		CO4	**Describe** the recent trends and procedure in the income tax assessment (**Understand**)
		CO5	**Compare** the tax structure of different taxable events and its applications (**Apply**)
CX 1431	**BUSINESS STATISTICS**	CO1	**Understand** statistical techniques those are applicable to business.**(Understand)**
		CO2	**Persuade** students in applying statistical techniques in business problem solving (**Evaluate)**
		CO3	**Evaluate** correlation and regression analysis (**Analyze)**
		CO4	**Calculate** the indices to measure price and quantity changes over period of time **(Analyze)**
		CO5	**Practice** time series in an informative way both graphically and with summary statistics **(Apply)**

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CX 1542	**COST ACCOUNTING**	CO1	**Explain** various cost and cost accounting concepts **(Analyze)**
		CO2	**Assess** the cost of various elements of cost such as Material, Labour and Overheads **(Evaluate)**
		CO3	**Differentiate** Cost and Financial accounting systems **(Analyze)**
		CO4	**Prepare** Cost Sheet and Reconciliation Statement **(Create)**
		CO5	**Identify** various cost accounting standards and its application in current situation **(Understand)**
CX 1543	**MARKETING MANAGEMENT**	CO1	**Recall** the knowledge of various concepts of modern marketing management(**Remember**)
		CO2	**Explain** the contemporary marketing process in the emerging business scenario(**Understand**)
		CO3	**Describe** various aspects of application of modern marketing techniques for obtaining a competitive advantages in business organisation (**Understand**)
		CO4	**Describe** various aspects of consumer behaviour(**Understand**)

		CO5	**Apply** advertising techniques in marketing **(Apply)**
CX 1571	**INCOME TAX ADMINISTRATION**	CO1	**Recall** the system of Tax Administration in India (**Remember**)
		CO2	**Explain** the contemporary trends adopted in the Tax Administration machinery.(**Understand**)
		CO3	**Describe** various rules and regulations to be followed for a successful Tax Administrative mechanism (**Understand**)
		CO4	**Illustrate** the knowledge and techniques regarding Income Tax Administration (**Apply**)
		CO5	**Discuss** the grievances redressal mechanism offered by the tax administrators **(Understand)**
CX 1541	**ENTREPRENEURSHIP DEVELOPMENT**	CO1	**Discuss** the entrepreneurial competencies. **(Understand)**
		CO2	**Explain** the entrepreneurial environment. (**Understand)**
		CO3	**Interpret** the business plan and feasibility study. **(Apply)**
		CO4	**Prepare** the project report preparation **(Apply)**
		CO5	**Explain** launching of small business **(Apply)**
CX 1572	**CUSTOMS DUTY- AN OVERVIEW**	CO1	**Associate** with Indirect taxes in India(**Understand**)
		CO2	**Explain** the process in foreign trade(**Apply**)
		CO3	**Categorize** and correlate the items in foreign trade (**Analyze**)
		CO4	**Compare** and **evaluate** the Import & Export trade(**Understand**)
		CO5	**Evaluate** and estimate the Customs Duty(**Evaluate**)

SEMESTER 6

COURSE CODE		COURSE NAME	COURSE OUTCOME	
CX 1651		**STRATEGIC MANAGEMENT**	CO1	**Describe** strategies adopted by corporates (**Understand**)
			CO2	**Differentiate** vision, mission, goal , objectives (**Understand**)
			CO3	**Describe** various ways to analyse business environment (**Understand**)
			CO4	**Observe** various means of strategic control (**Understand**)
			CO5	**Develop** tools and techniques for strategic control in an organisation (**Create**)
CX 1642		**APPLIED COSTING**	CO1	**Recognise** important terms and concepts of Applied Costing **(Remember)**
			CO2	**Distinguish** various costing methods and techniques **(Evaluate)**
			CO3	**Prepare** Cost statements as per various systems of cost accounting **(Apply)**
			CO4	**Solve** problems associated with various Costing methods and techniques **(Create)**
			CO5	**Justify** the application of various methods and techniques in a situation **(Create)**
CO 1641		**AUDITING**	CO1	**Discuss** the various types of audit, Audit Process and documentation (**Understand**)
			CO2	**Explain** the Vouching and Verification. **(Apply)**
			CO3	**Compare** verification and valuation of assets in an organisation**(Apply)**
			CO4	**Explain** the provisions in the Companies Act regarding Auditors of Joint Stock Companies. **(Understand)**
			CO5	**Describe** the investigation and types of investigation.**(Understand)**
CX 1643		**MANAGEMENT ACCOUNTING**	CO1	**Recognise** important terms and concepts of Management Accounting(**Remember**)
			CO2	**Develop** practical knowledge in the preparation of various budgets (**Apply**)
			CO3	**Prepare** Fund Flow statement as per systems of management accounting (**Apply**)
			CO4	**Prepare** Cash Flow Statement as per systems of management accounting (**Apply**)

			CO5	**Solve** problems associated with various Management accounting techniques (**Create**)
CX 1671		**INCOME TAX PLANNING AND MANAGEMENT**	CO1	**Enumerate** the tax planning measure (**Remember**)
			CO2	**Compare** and select the provisions of tax planning (**Apply**)
			CO3	**Consider** and **Recommend** measures to reduce tax liability (**Evaluate**)
			CO4	**Integrate** the various provisions , rules, regulations applicable in tax planning (**Create**)
			CO5	**Compare** the various provisions of Income Tax Act for Planning Tax(**Analyze**)
CX 1672		**GOODS AND SERVICE TAX**	CO1	**Understand** the indirect tax regime in the country (**Understand**)
			CO2	**Analyze** the structure of GST (**Analyze**)
			CO3	**Evaluate** the effectiveness of the present GST structure on various sectors (**Evaluate**)
			CO4	**Create** awareness regarding the indirect tax structure prevailing in the country (**Create**)
			CO5	**Analyze** the various tax rates prevailing in the country (**Analyze**)

DEPARTMENT OF MANAGEMENT

BBA

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1111.1	**ENGLISH I**	CO1	**Define** the tenets of Soft skills and the four fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Develop** conversational skills through dialogue writings. (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)

BM1121	**ENVIRONMENTAL STUDIES**	CO1	**Describe** the significance of environmental studies and the conservation and restoration of natural resources. (**Understand**)
		CO2	**Explain** interactions and relationships in an ecosystem and the significance and conservation of biodiversity. (**Understand**)
		CO3	**Examine** the sources of environmental pollution and the methods used to control it. (**Apply**)
		CO4	**Develop** solutions to maintain sustainable development of the environment. (**Apply**)
		CO5	**Develop** first-hand knowledge on various local environmental aspects which forms an irreplaceable tool in the entire learning process. (**Create**)
BM1141	**FUNDAMENTALS OF MANAGEMENT**	CO1	**Explain** the concept of management and the various schools of management thought. (**Understand**)
		CO2	**Review** the process of planning, decision making and MBO. (**Understand**)
		CO3	**Describe** the organization as a structure and a process.(**Understand**)
		CO4	**Discuss** the concept of Staffing, Directing and Controlling.(**Understand**)
		CO5	**Describe** the emerging trends in management. (**Understand**)
BM 1142	**MANAGERIAL ECONOMICS**	CO1	**Describe** the applications of Managerial Economics in business decision making. (**Understand**)
		CO2	**Analyze** and forecast the product demand of an organization. (**Analyze**)
		CO3	**Describe** the concept of cost, nature of production and its relationship to business operations. (**Understand**)
		CO4	**Explain** about the tools of economic theory to optimal production and pricing decisions by the firm in each market structure. (**Understand**)
		CO5	**Summarize** the overall receipts and payments which are justifiable for a firm. (**Understand**)
BM 1143	**FINANCIAL ACCOUNTING**	CO1	**Explain** the major concepts and theoretical foundations of financial accounting. (**Understand**)
		C02	**Prepare** the financial statements consisting of trading, profit & loss account and balance sheet of a sole proprietorship concern. (**Apply**)
		CO3	**Develop** the financial statements of a joint stock company as per the Companies Act, 2013 by understanding the contents of the financial statements and corporate annual report (**Apply**)
		CO4	**Illustrate** the different techniques of financial statement analysis such as horizontal, vertical and ratio analysis. (**Understand**)
		CO5	**Describe** Indian Accounting Standards and International Financial Reporting Standards. (**Understand**)
BM 1131	**STATISTICS FOR BUSINESS**	CO1	**Discuss** the key terminology, concepts, tools and techniques used in business statistical analysis for decision making.

	DECISIONS		(**Understand**)
		CO2	**Apply** the measures of central tendency and dispersion in various situations. (**Apply**)
		CO3	**Analyze** the statistical data using Correlation and Regression(**Analyze**)
		CO4	**Analyze** the statistical data using Time Series analysis (**Analyze**)
		CO5	**Construct** index numbers using basic rules and suitable methods. (**Apply**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1211.4	**ENGLISH FOR CAREER**	CO1	**Develop** language skills required for appearing in career oriented competitive examinations. (**Apply**)
		CO2	**Discuss** modules of study that would develop the cognitive, logical,verbal and analytical skills necessary to succeed in competitive examinations.(**Understand**)
		CO3	**Identify** the pattern of questions based on common models of competitive test (**Remember**)
		CO4	**Recall** the grammatical and syntactical rules by solving remedial exercises. (**Remember**)
		CO5	**Prepare** students for competitive examinations (**Create**)
BM 1221	**E-COMMERCE AND CYBER-LAW**	CO1	**Describe** the concepts of internet (**Remember**)
		CO2	**Explain** the basic concept of e-business and e-commerce. (**Understand**)
		CO3	**Discuss** various electronic payment systems. (**Understand**)
		CO4	**Discuss** about the cyber laws in India and cyber security. (**Understand**)
		CO5	**Apply** the new trends of E-Commerce and practices in modern business scenario (**Apply**)
BM 1241	**MARKETING MANAGEMENT**	CO1	**Explain** the concepts of marketing management, its evolution and the marketing environment. (**Understand**)
		CO2	**Determine** the market based on segmentation, targeting and positioning. (**Apply**)
		CO3	**Discuss** the product marketing decisions based on product life cycle and use pricing strategies to enhance marketing of products and services. (**Understand**)
		CO4	**Describe** common methods of marketing communication and the use of distribution channels to market an organization's products and services effectively. (**Understand**)
		CO5	**Identify** the unique features of services and the various components of the services marketing mix. (**Understand**)
BM 1242	**HUMAN RESOURCE MANAGEMENT**	CO1	**Explain** the basic concepts of Human Resource Management and its relevance in organisations. (**Understand**)

		CO2	**Describe** the processes of job analysis and Human Resource forecasting and discuss their importance in Manpower planning **(Understand)**
		CO3	**Differentiate** between Training and Development and recognize the roles of these activities in Human Resource Management (**Understand**)
		CO4	**Summarize** the methods of performance appraisal and compensation and benefit plans and their effectiveness (**Evaluate**)
		CO5	**Discuss** various methods to build and maintain positive employees' relations (**Understand**)
BM 1243	**FINANCIAL MANAGEMENT**	CO1	**Explain** the strategic role of financial management in modern business.(**Understand**)
		CO2	**Apply** the methods and techniques for assessing the profitability of a project.(**Apply**)
		CO3	**Illustrate** the operational and institutional characteristics of contemporary capital markets.(**Understand**)
		CO4	**Analyze** and evaluate the opportunities and threats in global business under the present scenario.(**Analyze**)
		CO5	**Examine** the methods and techniques of managing working capital of an organisation.(**Remember**)
BM 1231	**BUSINESS REGULATORY FRAMEWORK**	CO1	**Explain** the law of contracts and its various elements in detail. (**Understand**)
		CO2	**Describe** in detail the different types of special contracts such as indemnity, guarantee, pledge, bailment and agency. (**Understand**)
		CO3	**Discuss** the various aspects of the Sale of goods Act. (**Understand**)
		CO4	**Examine** the rights of a consumer and the grievance redressal measures available to them at the district, state and national level under the Consumer protection act. (**Apply**)
		CO5	**Discuss** the basics of Goods and Service tax. (**Understand**)

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
BM 1341-	**BUSINESS ENVIRONMENT AND POLICY**	CO1	**Explain** different factors influencing the performance of Business and different techniques for analysing those factors (**Understand**)
		CO2	**Describe** the economic environment of business and the important economic policies in India (**Understand**)
		CO3	**Summarize** the social, political, technological and legal environment of business in India (**Understand**)
		CO4	**Discuss** the social environment of business and the responsibility of business towards the society (**Understand**).
		CO5	**Explain** the global environment of business and the globalisation of Indian business (**Understand**)

BM1342	**CORPORATE REGULATIONS**	CO1	**Describe** the procedure and the documents related to the formation of a company(**Understand**)
		CO2	**Discuss** the provisions for appointment, removal, disqualifications and other aspects of a director in a company (**Understand**)
		CO3	**Summarize** the different types of meetings of the company and the various requisites for a valid meeting (**Understand**)
		CO4	**Describe** the modes of winding up in a company (**Understand**)
		CO5	**Explain** the fundamental aspects of Intellectual Property Rights and disseminate knowledge on patents, copy rights, trade marks and geographical indications (**Understand**)
BM1343	**COST AND MANAGEMENT ACCOUNTING**	CO1	**Describe** the objectives & applications of Cost Accounting and Management Accounting in modern business (**Remember**)
		CO2	**Describe** the tools of analysis of financial statements (**Understand**)
		CO3	**Interpret** financial statement using ratio analysis and cash flow statement (**Understand**)
		CO4	**Prepare** Cash Budget (**Apply**)
		CO5	**Differentiate** between fund flow and cash flow statement (**Analyze**)
BM1344	**FINANCIAL SERVICES**	CO1	**Explain** the components of a financial system. (**Understand**)
		CO2	**Describe** in detail the various fund based financial services. (**Understand**)
		CO3	**Discuss** about the various fee based financial services. (**Understand**)
		CO4	**Examine** banking products and services and also retail banking services. (**Apply**)
		CO5	**Examine** different types of insurance and insurance products and services. (**Apply**)
BM 1361.2	**CONSUMER BEHAVIOUR**	CO1	**Explain** the scope and need for studying consumer behaviour. (**Understand**)
		CO2	**Relate** the individual determinants such as perception, learning, personality, attitude and motivation to the choices consumers make. (**Understand**)
		CO3	**Analyze** the process of consumer decision making and the buying decision models. (**Analyze**)
		CO4	**Describe** the basis of market segmentation and the loyalty marketing strategies. (**Understand**)
		CO5	**Discuss** the post purchase behaviour of consumers and market regulation. (**Understand**)

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
BM1441	**ENTREPRENEURSHIP DEVELOPMENT**	CO1	**Describe** the concept of entrepreneurship and its role i economic development (**Understand**)
		CO2	**Explain** in detail about Micro Small and Medium Enterprise. (**Understand**)
		CO3	**Discuss** about entrepreneurship development programmes and the various promotional agencies that assist entrepreneurs. (**Understand**)
		CO4	**Identify** the various sources of raising finance for business and the role of institutions in entrepreneurial development. (**Apply**)
		CO5	**Examine** the steps involved in project identification, formulation, analysis, evaluation and implementation. (**Understand**)
BM 1442	**BUSINESS ETHICS & CORPORATE**	CO1	**Describe** the concept of Business Ethics (**Understand**)
		CO2	**Explain** in detail about Ethical values. (**Understand**)
		CO3	**Discuss** about culture, organisation culture and cultural diversity (**Understand**)
		CO4	**Describe** the concept of Corporate Social Responsibility of Business (**Understand**)
		CO5	**Discuss** the concept of Corporate Governance and Summarise the codes of Corporate Governance in India and other countries (**Understand**)
BM 1443	**OPERATIONS MANAGEMENT**	CO1	**Describe** the elements of operations management and various transformation processes to enhance productivity and competitiveness. (**Understand**)
		CO2	**Discuss** the various production and operations design decisions and how they relate to the overall strategies of organizations(**Understand**)
		CO3	**Summarize** aggregate capacity plans and MPS in operation environments. (**Understand**)
		CO4	**Describe** the suitable methods for materials management and also about the various levels of inventory to be maintained in the organisation. (**Understand**)
		CO5	**Explain** the quality management practice in organizations and how total quality management and six-sigma facilitate organizational effectiveness(**Understand**)
BM 1444	**SKILL ENHANCEMENT & EMPLOYABILITY**	CO1	**Describe** the nature of stress and stress management measures(**Remember**).
		CO2	**Discuss** the types of communication and its effectiveness(**Understand**).
		CO3	**Determine** the principles of effective written communication(**Apply**).
		CO4	**Explain** the basics of etiquette and general etiquette to be followed by a student (**Understand**).

		CO5	**Explain** the preparations for an interview, types and the interview process(**Analyze**)
BM1461.2	**ADVERTISING AND SALES PROMOTION**	CO1	**Define** integrated marketing communication mix and the importance of marketing communication. (**Remember**)
		CO2	**Demonstrate** an understanding of the overall role advertising plays in the business and discuss the various advertising media. (**Understand**)
		CO3	**Assess** the means of testing effectiveness of advertising and the methods of advertising budgets. (**Evaluate**)
		CO4	**Discuss** how an advertising agency operates. (**Understand**)
		CO5	**Explain** use of sales promotion as a marketing tool.(**Understand**)

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
BM 1541	**QUANTITATIVE TECHNIQUES FOR MANAGEMENT**	CO1	**Formulate** linear programming Problem (**Create**).
		CO2	**Discuss** transportation problem (**Understand**).
		CO3	**Construct** network diagram (**Apply**)
		CO4	**Prepare** payoff and opportunity loss table (**Create**)
		CO5	**Explain** probability distribution (**Analyze**).
BM 1542	**RESEARCH METHODOLOGY**	CO1	**Describe** in detail about the process, steps and different type of research. (**Understand**)
		CO2	**Explain** the steps in designing a good research design (**Understand**)
		CO3	**Discuss** about various sources of data, rating scales and sampling techniques. (**Understand**)
		CO4	**Describe** statistical tools and techniques for data analysis. (**Understand**)
		CO5	**Examine** the contents, qualities and types of research report. (**Understand**)
BM 1543	**INVESTMENT MANAGEMENT**	CO1	**Describe** the concepts of Investment and the different Investment avenues and its benefits (**Understand**)
		CO2	**Discuss** the basic concepts of Capital Market and also about the role of stock exchanges in India. (**Understand**)
		CO3	**Summarize** the different types of derivative instruments. (**Understand**)
		CO4	**Describe** the role of SEBI in capital market. (**Understand**)
		CO5	**Explain** the benefit of diversification of holding a portfolio of assets, and the importance played by the market portfolio.

			(**Understand**)
BM 1561.2	**CUSTOMER RELATIONSHIP MANAGEMENT**	CO1	**Explain** the concept of Customer Relationship Management (CRM), the benefits delivered by CRM and the CRM process. (**Understand**)
		CO2	**Implement** how CRM practices and technologies enhance the achievement of marketing, sales and service objectives throughout the customer life-cycle stages of customer acquisition, retention and development whilst simultaneously supporting broader organizational goals. (**Apply**)
		CO3	**Describe** Sales Force Automation and the concept of e-CRM and e-CRM technologies. (**Understand**)
		CO4	**Explain** about Analytical CRM and the concept of data warehousing and data mining. (**Understand**)
		CO5	**Discuss t**he successful implementation of CRM in organizations and its practices in various industries.(**Understand**)
BM 1551.4	**FUNDAMENTALS OF FINANCIAL ACCOUNTING**	CO1	**Extend** the fundamental and basic facts, concepts and assumptions regarding financial accounting (**Understand**)
		CO2	**Apply** the rules and principles to follow while preparing different books of accounts (**Apply**)
		CO3	**Explain** the preparation of financial statements of a business concern (**Apply**)
		CO4	**Distinguish** the difference between the preparation and trial balance and balance sheet (**Evaluate**)
		CO5	**Apply** new methods for preparing company Accounts (**Apply**)

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
BM1641	**MANAGEMENT INFORMATION SYSTEM**	CO1	**Explain** the basic concepts and technologies used in the field o management information systems
		CO2	**Describe** the types of information systems and its applications in business.
		CO3	**Discuss** the basic concepts of Database Management System
		CO4	**Summarise** the systems concept, system analysis, design, testing and Implementation
		CO5	**Examine** the ethical, social, and security issues of information systems and the technical solutions for it.

BM 1642	**INTERNATIONAL BUSINESS**	CO1	**Describe** international business environment and the differen modes of entry into international business (**Understand**)
		CO2	**Explain** in detail about trade barriers, trade blocks and multinational corporations (**Understand**)
		CO3	**Discuss** about export/import procedures and documentation. (**Understand**)
		CO4	**Describe** about International Financial Organisations and Marketing strategies (**Understand**)
		CO5	**Examine** the impact of Globalisation in Indian business. (**Understand**)
BM 1661.6	**INDIAN BANKING SYSTEMS**	CO1	**Describe** in detail about the different systems of banking (**Understand**)
		CO2	**Explain** about Banking Regulation Act and Negotiable Instruments Act. (**Understand**)
		CO3	**Discuss** about commercial banks, NBFC's and RBI. (**Understand**)
		CO4	**Describe** in detail the structure and role of Co-operative banks. (**Understand**)
		CO5	**Examine** the concepts, evolution, nature and importance of development banks.(**Remember**)
BM 1643	**STRATEGIC MANAGEMENT**	CO1	**Describe t**he strategic management process to analyse and improve organizational performance. (**Understand**)
		CO2	**Discuss** the internal capabilities and external opportunities of the organisation. (**Understand**)
		CO3	**Summarize** the different types of strategies and identify the suitable strategies for the business activities. (**Understand**)
		CO4	**Describe** the implementation plans to execute those strategies. (**Understand**)
		CO5	**Explain** the evaluation criteria's and the various control process. (**Understand**)
BM 661.2	**RETAIL MANAGEMENT**	CO1	**Discuss** the functions of retailing, various retail formats and the career opportunities available in the retail business. (**Understand**)
		CO2	**Explain** Strategic retail planning process and the factors considered in site selection decisions. (**Understand**)
		CO3	**Describe** the concept of Visual merchandising and pricing, labelling and packaging in retail business. (**Understand**)

		CO4	**Discuss** the evolution of supply chain management and the concept of online logistics management. (**Understand**)
		CO5	**Explain** the concept of retail promotion and the emerging trends in retailing. (**Understand**)

DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS

BCA

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1111.4	**LANGUAGE SKILLS**	CO1	**Define** the tenets of Soft skills and the four fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Develop** conversational skills through dialogue writings. (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)
MM1131.9	**MATHEMATICS 1**	CO1	**Recall** basic differentiation techniques, concepts of prime numbers and general concepts of differential and partial differential equations. **(Remember).**
		CO2	**Discuss** hyperbolic and inverse hyperbolic function, Laplace and inverse Laplace transforms, mean value theorem and Rolle's theorem. **(Understand)**
		CO3	**Solve** Problems using Leibnitz's theorem Harmonic analysis and Fourier series. **(Apply)**
		CO4	**Compute** maxima and minima of a function, solution of differential equations, real and imaginary parts of complex numbers and optimum using linear programming problems.**(Apply)**
		CO5	**Explain** unique factorization theorem, Euclidean algorithm, congruence, Fermat's theorem, Wilson's theorem and complex mapping.**(Analyze)**
CP1121	**COMPUTER FUNDAMENTALS AND ORGANIZATION**	CO1	**Describe** the basic hardware components of computer system **(Understand).**
		CO2	**Compare** different memory units, storage devices and various architectures of control unit (**Understand**)

		CO3	**Illustrate** the concept of instruction set (**Understand**)
		CO4	**Discuss** input-output organization and different modes of data transfer (**Understand**)
		CO5	**Discuss** transfer Modes(**Understand**)
CP1131	**DIGITAL ELECTRONICS**	CO1	**Memorize** the basic concepts of electronics **(Remember)**
		CO2	**Compute** problems related to number system conversions, binary arithmetic operations, SOP, POS and K-map **(Apply)**
		CO3	**Illustrate** the different types of logic gates, flip flops **(Understand)**
		CO4	**Illustrate** the characteristics of different combinational circuits **(Understand)**
		CO5	**Compute** problems related to SOP, POS and K-map **(Apply)**
CP1141	**INTRODUCTION TO PROGRAMMING**	CO1	**Explain** algorithms, flowchart and basic structure of C programming **(Understand)**
		CO2	**Construct** C programs using operators and control structures **(Apply)**
		CO3	**Apply** the concepts of arrays, pointers and functions in C language **(Apply)**
		CO4	**Illustrate** the use of string functions in C language **(Apply)**
		CO5	**Explain** the different file handling functions in C-language **(Apply)**
CP1142	**C PROGRAMMING LAB**	CO1	**Devise** programs to demonstrate the use of data types, and operators. **(Apply)**
		CO2	**Devise** programs to demonstrate the use of control structures. **(Apply)**
		CO3	**Develop** programs to demonstrate arrays, structures, functions and pointers. **(Create)**
		CO4	**Develop** programs to demonstrate string handling functions. **(Create)**
		CO5	**Develop** programs to implement the usage of files and library functions.**(Create)**
CP1122	**OPEN OFFICE LAB**	CO1	**Apply** the features of Linux Operating System **(Apply)**
		CO2	**Illustrate** the working of Linux commands **(Apply)**
		CO3	**Illustrate** the features of word processor and open office worksheets **(Apply)**
		CO4	**Develop** creative skills using open office presentation features **(Apply)**
		CO5	**Develop** creative skills using office worksheets and presentations in real life problems.**(Apply)**

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1211.4	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests. **(Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. **(Create)**
MM1231.9	**MATHEMATICS II**	CO1	**Recall** set theory concepts, set operations, relations and its operations, equivalence relations and partitions, algebra and functions. (**Remember**).
		CO2	**Explain** formal proofs, methods of proofs (proofs by contradiction, false proof and induction), Boolean expressions, logical equivalence, DeMorgan's law, tautologies, Implications, arguments, fallacies, Normal forms in propositional logic, resolution, partial orders, ordered sets, fractals, grammars, languages, automation and introduction of matlab. (**Understand**)
		CO3	**Illustrate** basics of fuzzy set theory, characteristic functions, Warshal's algorithm, recursion, group, ring, polish expressions and hamming codes(**Understand**)
		CO4	**Explain** graph notation, topological sort, graph propagation algorithm, depth first and breadth first searches, shortest path algorithms and directed acyclic graphs. (**Apply**)
		CO5	**Analyze** graphical representation of functions, graphical interpretation of convergence and complex mapping.(**Analyze**)
CP1241	**ENVIRONMENTAL STUDIES**	CO1	**Describe** the significance of environmental studies and the conservation of ecosystems and biodiversity **(Understand)**
		CO2	**Explain** the sources of environmental pollution and the awareness of environmental laws. **(Understand)**
		CO3	**Describe** the significance of human communities, disaster management and environmental ethics**.(Understand)**
		CO4	**Develop** case study on environmental issues and its awareness to public.**(Create)**
		CO5	**Develop** solutions to maintain sustainable development of the environment. **(Apply)**
CP1242	**OBJECT ORIENTED PROGRAMMING**	CO1	**Explain** the concepts of OOP and the basic structure of C ++programming **(Understand)**

		CO2	**Construct** C++ programs using the concept of classes, objects, friend functions, constructors, destructors and operator overloading. **(Create)**
		CO3	**Develop** C++ programs using the concept of inheritance and dynamic memory allocation **(Apply)**
		CO4	**Develop** C++ programs using the concept of polymorphism **(Apply)**
		CO5	**Construct** C++ programs using the concept of I/O and file management and exception handling. **(Create)**
CP1243	**DATA STRUCTURES IN C**	CO1	**Distinguish** the different searching and sorting techniques. (**Analyze**)
		CO2	**Illustrate** the static and dynamic implementation of Stack and Queue data structures. (**Apply**)
		CO3	**Illustrate** the memory representation and different operations performed on linked list data structure. (**Understand**)
		CO4	**Explain** the operations performed on nonlinear data structures such trees and graphs (**Understand**)
		CO5	**Apply** the applications of stack data structure(**Apply**)
CP1244	**OBJECT ORIENTED PROGRAMMING LAB**	CO1	**Develop** programs to demonstrate the use of data types, operators and control structures. **(Apply)**
		CO2	**Develop** programs to demonstrate the use of classes and structures. **(Apply)**
		CO3	**Devise** programs to illustrate the concept of inheritance. **(Create)**
		CO4	**Devise** programs to illustrate the concept of operator overloading and friend functions **(Create)**
		CO5	**Devise** programs to demonstrate the use of early and late binding, file handling and exception handling **(Create)**
CP1245	**DATA STRUCTURES IN C LAB**	CO1	**Devise** programs to implement different searching and sorting techniques. (**Create**)
		CO2	**Develop** programs to demonstrate the insertion, deletion and searching operations on linked list (**Apply**)
		CO3	**Develop** programs to demonstrate the static and dynamic implementation of Stack and Queue. (**Apply**)
		CO4	**Develop** programs to demonstrate the traversal techniques of binary tree and graphs. (**Apply**)
		CO5	**Develop** program to demonstrate the evaluation of expression using Stack data structure (**Create**)

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CP1331	**VALUE EDUCATION**	CO1	**Demonstrate** the concepts of NSS, its activities, Life skills and various youth development programmes **(Apply)**
		CO2	**Explain** functions, duties and activities of NCC**(Understand)**
		CO3	**Explain** the concepts of various disasters and its impact**(Understand)**
		CO4	**Explain** various disaster Risk Management **(Understand)**
		CO5	**Discuss** types of organ donation, its process, procedure and ethical issues**(Understand)**
CP1341	**COMPUTER NETWORKS & SECURITY**	CO1	**Describe** about computer networks and data communication (**Understand**)
		CO2	**Explain** different models and its comparison (**Understand**)
		CO3	**Illustrate** different techniques for error detection and correction (**Apply**)
		CO4	**Determine** the different routing algorithms for routing (**Apply**)
		CO5	**Explain** the concepts of cryptography, authentication systems and various security measures in web, email and network systems. (**Analyze**)
CP 1342	**OPERATING SYSTEMS**	CO1	**Describe** the different types of OS, its components and services and types of system programs. (**Understand**)
		CO2	**Illustrate** the process management concepts and its scheduling algorithms. (**Apply**)
		CO3	**Demonstrate** the different memory management and protection concepts (**Apply**)
		CO4	**Illustrate** the structure and allocation methods of storage systems and I/O hardware (**Apply**).
		CO5	**Describe** IO systems and its specifications(**Understand**)
CP1343	**DATABASE MANAGEMENT SYSTEMS**	CO1	**Explain** the concept of database, relational data model and its operation.(**Understand**)
		CO2	**Develop** skills to design an ER diagram.(**Create**)
		CO3	**Create** database and perform operations using SQL.(**Create**)
		CO4	**Illustrate** functional dependencies (**Apply**)
		CO5	**Illustrate** normalization procedures in database(**Apply**)
CP 1344	**PROGRAMMING IN JAVA**	CO1	**Describe** the java programming and oops concepts(**Understand**)
		CO2	**Apply** the concept of Inheritance, Interface and Packages in Java Programming and solve applications based on these concepts (**Apply**)

		CO3	**Illustrate** the basic concepts of Exception handling, Multithreading and solve applications based on these concepts (**Apply**)
		CO4	**Apply** the concept of Java IO packages and solve applications based on this concept(**Apply**)
		CO5	**Explain** the concept of Applet programming, AWT, Swing Controls and JDBC(**Analyze**)
CP1343	**DBMS LAB**	CO1	**Devise** programs to implement database creation and manipulation. (**Create**)
		CO2	**Develop** programs to demonstrate aggregate functions in DBMS (**Apply)**
		CO3	**Develop** programs to demonstrate join operations (**Apply**)
		CO4	**Develop** programs to implement primary key concept. (**Apply**)
		CO5	**Develop** programs to implement foreign key concept. (**Apply**)
CP 1344	**JAVA PROGRAMMING LAB**	CO1	**Develop** programs to demonstrate the use of control structures(**Apply**)
		CO2	**Devise** programs to demonstrate the concept of Strings and Classes and Objects(**Create**)
		CO3	**Devise** programs to illustrate the concepts of Inheritance, Interface, Packages and files. (**Create**)
		CO4	**Devise** programs to demonstrate the use of Exception handling, Multithreading, AWT controls and Applets. (**Create**)
		CO5	**Develop** programs to illustrate the concept of Applets and AWT controls(**Apply**)

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CP1441	**SOFTWARE ENGINEERING**	CO1	**Describe** the principles of the engineering processes in software development (**Understand**)
		CO2	**Illustrate** different project estimation techniques. (**Apply**)
		CO3	**Analyze** the requirements for the software projects. (**Analyze**)
		CO4	**Design** the requirements of the software projects using function oriented and object-oriented approach. (**Create**)
		CO5	**Describe** the different levels of testing, software quality assurance and maintenance (**Understand**)
CP1442	**WEB PROGRAMMING & PYTHON**	CO1	**Understand** the basic skills in moderately complex use of the following tools/scripts/languages:HTML, DHTML, CSS, Javascript.(**Understand**)
		CO2	**Apply** the appropriate web tools/languages for creating state-of-the art websites(**Apply**)

		CO3	**Remember** the concepts of python programming(**Remember**)
		CO4	**Analyze** the concepts of advanced programming using python(**Analyze**)
		CO5	**Discuss** the concepts of conditional and looping statements(**Understand**)
CP1443	**PHP &MySQL**	CO1	**Define** features, Operators and the control structures**.(Remember)**
		CO2	**Explain** arrays and types **(Understand)**
		CO3	**Explain** forms and its components **(Understand)**
		CO4	**Describe** the use of cookies and sessions in a Php. **(Understand)**
		CO5	**Develop** skills to write database queries **(Create)**
CP1443	**DATA MINING & WAREHOUSING**	CO1	**Understand** the basic concept of data,knowledge,mining and data preprocessing techniques **(Understand)**
		CO2	**Recognize** data warehouse concept,architecture and business analysis tools**(Remember)**
		CO3	**Evaluate** algorithms for finding hidden and interesting patterns in data**(Analyze)**
		CO4	**Understand** and apply various classification a techniques using tools**(Understand)**
		CO5	**Understand** and apply various clustering and outlier detection techniques using tools**(Understand)**
CP1445	**MINI PROJECT**	CO1	**Practice** the various phases in the SDLC **(Apply)**
		CO2	**Plan** and estimate a project. **(Analyze)**
		CO3	**Plan** time, person and resource management**(Analyze)**
		CO4	**Construct** coding and implementation **(Apply)**
		CO5	**Construct** testing and deployment of the software**(Apply)**
CP1446	**PHP &MySQL LAB**	CO1	**Develop** Database creation, table creation, insertion, updation, deletion and select. **(Create)**
		CO2	**Develop** Programs to connect PHP and MYSQL**(Create)**
		CO3	**Test** WAMP/XAMPP Server Setup or Setup Apache, MySQL and PHP separately in PHP Lab. **(Analyze)**
		CO4	**Develop** php programmes with forms, arrays, functions and strings, session and cookies. **(Create)**
		CO5	**Develop** simple php programs using decision making and loop constructs **(Create)**
CP1447	**WEB PROGRAMMING AND PYTHON LAB**	CO1	**Devise** programs to implements basic concepts of HTML(**Create**)

		CO2	**Develop** websites using HTML, DHTML, CSS, Javascript(**Apply**)
		CO3	**Develop** programs to demonstrate the use of data types, operators and control structures.**(Create)**
		CO4	**Devise** programs to demonstrate the use of arrays, structures, functions and pointers(**Create**)
		CO5	**Devise** programs to implement the usage of files and library functions. (**Create**)

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CP1541	**DATA ANALYTICS**	CO1	**Understand** the basic concept of data analytics used in practice and its works**(Understand)**
		CO2	**Understand** how data-driven insights can be used for making effective decisions across domains like Marketing, Finance etc.**(Understand)**
		CO3	**Identify** the correct analytics tool for a specific need and find reliable ways to collect, analyse, visualise and utilise data for decision-making**.(Understand)**
		CO4	**Employ** tips and tricks for Big Data use cases and solutions.(**Apply**)
		CO5	**Prepare** to build and maintain reliable, scalable, distributed systems with Apache Hadoop(**Create**)
CP1542	**INFORMATION SYSTEMS AND KNOWLEDGE MANAGEMENT**	CO1	**Understand** evolution of information and quality (**Understand**)
		CO2	**Understand** how to handle knowledge (**Understand**)
		CO3	**Understand** knowledge management and establish a knowledge strategy of framework (**Understand**)
		CO4	**Illustrate** knowledge management application in organizations (**Understand**)
		CO5	**Analyze** the role of Knowledge management and application in organization**(Analyze)**
CP1543	**VISUAL PROGRAMMING**	CO1	Describe the basic information about the features of visual studio tools **(Understand)**
		CO2	Illustrate the concept of cascading style sheets (CSS) for designing web pages. **(Apply)**
		CO3	Explain different web server and validation controls **(Apply)**

		CO4	Describe state management techniques and its application **(Understand)**
		CO5	**Explain** ADO.NET and its implementation **(Apply)**
CP1544	**SOFTWARE TESTING**	CO1	**Discuss** the basic concepts of testing **(Understand)**
		CO2	**Explain** the different levels of testing **(Apply)**
		CO3	**Recognize** the bugs used in testing**(Remember)**
		CO4	**Describe** the tools used for testing **(Understand)**
		CO5	**Compute** problems related to cyclomatic complexity **(Apply)**
CP1545	**DATA ANALYTICS LAB**	CO1	**Understand** and implement the basics of data preprocessing using NLTK (**Understand**)
		CO2	**Demonstrate** pandas package for statistical analyst (**Analyze**)
		CO3	**Understand** dataset analysis using python packages (**Understand**)
		CO4	**Illustrate** and apply different visualization methods for given datasets using python packages(**Understand**)
		CO5	**Devise** program to apply data analytical problems in real life **(Create)**
CP1546	**VISUAL PROGRAMMING LAB**	CO1	**Illustrate** Visual Studio IDE. **(Understand)**
		CO2	**Design** web pages using different web server controls. **(Create)**
		CO3	**Apply** CSS, Validation and session management in web applications. **(Apply)**
		CO4	**Develop** web applications to demonstrate database programming. **(Apply)**
		CO5	**Develop** web applications to illustrate the use of data bound controls in web pages. **(Apply)**

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CP1641	**MULTIMEDIA SYSTEMS**	CO1	**Analyze** and synthesise the key components of multimedia technologies including text, graphics, voice video and animation **(Analyze)**
		CO2	**Define** the characteristics of each media type and describe their application **(Remember)**

		CO3	**Analyze** the protocols, standards and representation techniques used for storage and transmission of multimedia information **(Analyze)**
		CO4	**Evaluate** the role of multimedia technologies in the online and web environment (**Evaluate**)
		CO5	**Evaluate** the role of multimedia technologies in the real life applications (**Evaluate)**
CP1642	**OBJECT ORIENTED ANALYSIS AND DESIGN**	CO1	**Remember** object oriented features(**Remember**)
		CO2	**Understand** Object Oriented System Development(**Understand**)
		CO3	**Apply** Unified Approach(**Apply**)
		CO4	**Analyse** various UML diagrams(**Analyze**)
		CO5	**Evaluate** objects static and dynamic model(**Evaluate**)
CP1643	**DESIGN AND ANALYSIS OF ALGORITHMS**	CO1	**Analyze** the complexity of algorithms **(Analyze)**
		CO2	**Identify** good algorithms among multiple solutions for a problem **(Understand)**
		CO3	**Evaluate** the problems using the suitable algorithm **(Evaluate)**
		CO4	**Compare** the complexity of different sorting algorithms **(Understand)**
		CO5	**Explain** the different types of algorithms in terms of polynomial time. **(Understand)**
CP1661	**ENTREPRENEURSHIP DEVELOPMENT**	CO1	**Adapt** the students to have a practical insight for becoming an entrepreneur. **(Create)**
		CO2	**Describ**e the students with the latest programs of the government authorities in promoting small and medium industries. **(Understand)**
		CO3	**Illustrate** knowledge regarding how to start new ventures **(Apply)**
		CO4	**Classify** the various sauces of business finance and identify different institutions that support entrepreneurs. **(Analyze)**
		CO5	**Describe** the concept of entrepreneurship and its role i economic development **(Understand)**
CP1644	**TRENDS IN COMPUTING**	CO1	**Analyze** the working cloud computing (**Analyze**)
		CO2	**Understand** the advantage and need of cloud storage(**Understand**)

		CO3	**Evaluate** the advanced technologies(**Evaluate**)
		CO4	**Understand** the need of fuzzy sets and neural network**(Understand)**
		CO5	**Identify** the problem area of neural networks and fuzzy logics**(Remember)**

MSC COMPUTER SCIENCE

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CS1611	**COMPUTER ARCHITECTURE**	CO1	**Describe** the basic hardware components of computer system **(Remember)**
		CO2	**Demonstrate** the concept of Microprocessors, instruction set, CISC and RISC Architectures **(Apply)**
		CO3	**Illustrate** memory organization and input/output organization **(Understand)**
		CO4	**Illustrate** non-linear pipeline processors **(Understand)**
		CO5	**Describe** the basic hardware components of computer system **(Remember)**
CS1612	**DATA STRUCTURES AND ALGORITHMS**	CO1	**Develop** efficient algorithms and analysis it complexity levels **(Apply)**
		CO2	**Understand** advanced tree structures and graph algorithms for the design of efficient algorithms suitable for solving advanced computational problems **(Understand).**
		CO3	**Devise** deterministic and non-deterministic algorithms**(Apply)**
		CO4	**Apply** algorithm design concept such as divide and conquer, greedy methods for solving different problems **(Apply)**
		CO5	**Apply** algorithm design concept such as dynamic programming, backtracking and branch and bound **(Apply)**
CS1612	**MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE**	CO1	**Define** Sets, Subsets, sequence, Functions, partitions, Functions for computer science, Permutation Functions, Subgroups, Monoids, Symmetric groups, Groups homomorphism and isomorphism, Cosets, Circuits. Spanning tree and Probability with example.. **(Remember and understand)**.
		CO2	**State** Lagrange's Theorem, Burnsides theorem, Baye's theorem, Axioms of probability, Lattices, Finite Boolean algebra**(Apply)**

		CO3	**Solve** problems based on operations on sets, product sets, Permutation of groups, Partially ordered sets, Normal subgroups, conditional probability and Contrast Inclusion-Exclusion principle, Pigeonhole Principle, Differentiate Euler and Hamiltonian graphs and Groups and Semigroups. (**Analyze** and **Apply**)
		CO4	**Summarise** Relations, Mathematics Logic- Statements and Notation, Connectives ,Normal Forms, The Theory of Interface for the statement Calculus, Inference Theory of the Predicate Calculus , and Basic Concept of Graph Theory. (**Evaluate**)
		CO5	**Combine** Growth of Functions, Finite –State Machines: Languages, representation of special grammars and languages, Finite state machines and properties of relations. (**Create**).
CS1614	**PROGRAMMING PARADIGMS**	CO1	**Explain** the characteristics and design principles of different Programming languages(**Understand**)
		CO2	**Demonstrate** the concept of OOP in C++ (**Understand**)
		CO3	**Apply** the concepts of packages and inheritance, in Java(**Apply**)
		CO4	**Apply** the concepts of Multithreading and Exception handling mechanisms in Java(**Apply**)
		CO5	**Apply** the concepts of languages like HTML, XML, CSS, JavaScript and Servlets**(Apply**)
CS1615	**COMPUTER NETWORKS**	CO1	**Describe** the components of data communication , network reference models and interconnecting devices**(Understand)**
		CO2	**Discuss** the concept of mobile communication ,telecommunication systems and wireless LAN **(Understand)**
		CO3	**Describe** the concepts of mobile IP ,Wireless Application Protocol , and wireless sensor networks **(Understand)**
		CO4	**Describe** the concepts of wireless sensor networks **(Understand)**
		CO5	**Describe** the concepts of IOT systems**(Understand)**
CS1616	**DATA STRUCTURES AND ALGORITHMS LAB**	CO1	**Develop** a program to implement various data structure concepts **(Create)**
		CO2	**Devise** programs to demonstrate the use of linked list, trees and graph **(Create)**
		CO3	**Apply** the concept of data structures in real time applications **(Apply)**
		CO4	**Create** case study reports in various applications using algorithms**(Create)**
		CO5	**Distinguish** various algorithms based on complexity estimation**(Analyze)**

CS1617	**JAVA PROGRAMMING LAB**	CO1	**Develop** programs to demonstrate the various concepts of object oriented programming in Java(**Apply**)
		CO2	**Devise** programs to demonstrate the concepts of Applet, AWT and JDBC(**Create**)
		CO3	**Develop** GUI applications using Java(**Apply**)
		CO4	**Develop** programs to demonstrate Java IO operations(**Apply**)
		CO5	**Devise** programs to demonstrate the concept of Inheritance and Interfaces(**Create**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CS1621	**MODERN OPERATING SYSTEMS**	CO1	**Define** the different types, components and services of an Operating System software. (**Remember**)
		CO2	**Describe** various process types, scheduling algorithms, process synchronization and handling of deadlock situation. (**Understand**)
		CO3	**Explain** the different approaches to memory management. (**Understand**)
		CO4	**Discuss** the structure, organization and allocation methods of File System and I/O System with the implementation in Linux OS. (**Understand**)
		CO5	**Describe** various security and protection methods(**Understand**)
CS1622	**ADVANCES IN DATABASE MANAGEMENT**	CO1	**Discuss** the basics of Database Management Systems and its relational model **(Understand)**
		CO2	**Develop** Entity-Relationship data model based on its concept and extended features **(Apply)**
		CO3	**Explain** the concept of Object Oriented Database Management Systems **(Understand)**
		CO4	**Explain** the concept of Distributed Database Management Systems and its architecture and functions **(Understand)**
		CO5	**Explain** the concept of transaction protocols**(Understand)**
CS 1623	**OBJECT ORIENTED ANALYSIS AND DESIGN**	CO1	**Illustrate** the concepts of Object Oriented Analysis and Design. **(Understand)**
		CO2	**Develop** various UML diagrams based on the concepts of Object Oriented Analysis and Design **(Create**)

		CO3	**Discuss** the concepts of Object oriented Analysis process and Design process **(Understand)**
		CO4	**Explain** software implementation and object oriented testing **(Understand**)
		CO5	**Develop** software applications using OOAD concept**(Create)**
CS1624	**GRAPHICS & MULTIMEDIA SYSTEMS**	CO1	**Illustrate** line (DDA, Bresenhams) and circle drawing algorithms.**(Understand)**
		CO2	**Solve** problems related to transformations, Clipping. **(Apply)**
		CO3	**Explain** multimedia system architecture and data compression techniques. **(Understand)**
		CO4	**Explain** 3D concepts **(Understand)**
		CO5	**Discuss** the basics of animation**(Understand)**
CS1625	**OPTIMIZATION TECHNIQUES**	CO1	**Identify** the scope and way in which LPP, dual LPP, Transportation Problem and Assignment Models are formulated. **(Understand)**
		CO2	**Illustrate** LPP using Simplex method and Big-M method. **(Apply)**
		CO3	**Illustrate** Transportation Problem by North West Corner rule, least cost method and Vogel's approximation method and also Assignment Problem by Hungarian Method. **(Apply)**
		CO4	**Explain** Network models, CPM & Pert, Queues and Queuing System **(Apply)**
		CO5	**Explain** travelling salesman problem, game theory, method of optimal strategies and rectangular games. **(Analyze)**
CS1626	**MINOR PROJECT & SEMINAR**	CO1	**Develop** the skill of problem identification, methodology and solution to socially useful applications.**(Create)**
		CO2	**Develop** a structured documentation for the implemented software application **(Create)**
		CO3	**Summarize** on current and emerging topics in computer science**(Evaluate)**
		CO4	**Plan** time, person and resource management(**Analyze**)
		CO5	**Construct** coding and implementation **(Apply)**
CS1627	**DATABASE & WEB PROGRAMMING LAB**	CO1	**Develop** Database creation, table creation, insertion, updation, deletion and select. **(Create)**
		CO2	**Develop** Programs to connect PHP and MYSQL**(Create)**
		CO3	**Design** responsive web pages using scripting languages and tools**(Create)**
		CO4	**Design** web application with database content and dynamic operations **(Create)**
		CO5	**Design** real life problems using database and mining concepts **(Create)**

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CS1631	**DATA MINING AND WAREHOUSING**	CO1	**Discuss** types of data objects and basic statistical description of data(**Understand**)
		CO2	**Distinguish** the different types of data visualization and data pre- processing techniques.(**Understand**)
		CO3	**Explain** the concepts of data warehousing and its different models. (**Understand**)
		CO4	**Compare** the different techniques used for classification. (**Analyze**)
		CO5	**Analyze** the different methods used for cluster analysis(**Analyze**)
CS 1632	**DISTRIBUTED SYSTEMS & CLOUD COMPUTING**	CO1	**Describe** the characteristics of distributed systems and its various models **(Remember)**
		CO2	**Illustrate** the distributed file system and its architecture **(Understand)**
		CO3	**Describe** transactions and concurrency control in distributed systems **(Remember)**
		CO4	**Illustrate** cloud computing, the components and data storage in cloud **(Understand)**
		CO5	**Explain** the concept of Service Oriented Architecture **(Understand)**
CS1633	**INFORMATION SECURITY**	CO1	**Compare** various types of cryptography algorithms **(Analyze)**
		CO2	**Explain** the different authentication and authorization methods used in Cryptography System **(Apply)**
		CO3	**Describe** various authentication protocols and world security protocols **(Understand)**
		CO4	**Explain** various software flaws and malwares and the concept of digital watermarking **(Understand)**
		CO5	**Describe** the basic components and terminologies of information system **(Remember)**
CS1634	**COMPILER DESIGN**	CO1	**Summarize** various system utilities and 8085 architecture. **(Understand)**
		CO2	**Describe** the basics of compiler structures. **(Remember)**
		CO3	**Formulate** the compiler design concepts and automata **(Create)**
		CO4	**Construct** Context Free Grammars.**(Create)**
		CO5	**Construct** Pushdown automata**(Create)**
CS1635C	**MACHINE INTELLIGENCE**	CO1	**Explain** the basic concepts and representation of knowledge **(Understand)**
		CO2	**Apply** the different techniques and search methods in A**I (Analyze)**

		CO3	**Discuss** the characteristics of expert system and its applications **(Understand)**
		CO4	**Summarize** the various reasoning methods and natural language processing approaches(**Evaluate**)
		CO5	**Discuss** the various natural language processing approaches**(Understand)**
CS1637	**DISTRIBUTED COMPUTING LAB**	CO1	**Construct** programs on RMI and RPC(**Apply**)
		CO2	**Construct** programs on TCP, FTP and UDP(**Apply**)
		CO3	**Develop** socket programs and client server applications(**Apply**)
		CO4	**Devise** programs on Cloud Storage(**Analyze)**
		CO5	**Develop** the basic concepts of Hadoop(**Apply**)
CS 1636	**NETWORK ADMINISTRATION LAB**	CO1	**Evaluate** various Linux commands for Linux administration, configuration and managing user accounts **(Evaluate)**
		CO2	**Experiment** network configuration, its types and communication methods **(Apply)**
		CO3	**Apply** network commands **(Apply)**
		CO4	**Experiment** network using Packet Tracer Software**(Apply)**
		CO5	**Apply** configuration of servers -telnet,ftp,dhcp,nfs**(Apply)**

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
CS1641	**RESEARCH AND TECHNICAL WRITING**	CO1	**Explain** various research types,objectives and scientific method of solving the research problems(**Understand**)
		CO2	**Create** articles, books,reports and slides using LaTEX(**Create**)
		CO3	**Create** presentations using Beamer(**Create**)
		CO4	**Practice** the basic programming and object oriented concepts of python language (**Apply**)
		CO5	**Illustrate** the database connectivity in python programming. (**Understand**)
CS1642D	**EMBEDDED SYSTEMS**	CO1	**Explain** the key concepts of embedded systems such as I/O, timers, interrupts, and interaction with peripheral devices. (**Understand)**

		CO2	**Reproduce** the programming concepts in Assembly level programming language and High-level programming language**. (Remember)**
		CO3	**Describe** the concept of multiple processes, threads, tasks in the operating system **(Remember)**
		CO4	**Explain** the functions related to OS**(Understand**)
		CO5	**Describe** RTOS and its services, management, and security issues **(Understand)**
CS1643	**MAJOR PROJECT**	CO1	**Prepar**e a proposal and synopsis of the topic. (**Create**)
		CO2	**Develop** various SDLC phases (**Create**)
		CO3	**Plan** and estimate project (**Analyze**)
		CO4	**Prepare** coding, testing and maintenance phase of the project (**Create**)
		CO5	**Prepare** the testing phase and deployment of the application(**Create**)

DEPARTMENT OF ENGLISH

BA ENGLISH LANGUAGE AND LITERATURE

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1111.1	**LANGUAGE SKILLS**	CO1	**Define** the tenets of Soft skills and the four fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Develop** conversational skills through dialogue writings. (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)
ML 1111.1	**MALAYALA KAVITHA**	CO1	**Describe** the characteristics of early stage Malayalam poetry with respect to classic translation (**Understand**)
		CO2	**Analyze** the different poetry genres in Malayalam (**Analyze**)
		CO3	**Identify** major poets in Malayalam (**Remember**)
		CO4	**Explain** the historical development of Malayalam poetry (**Understand**)
		CO5	**Prepare** Poetry Review (**Evaluate**)
HN 1111.1	**HINDI KATHA**	CO1	**Recollect** the main works of the prescribed fiction writers

	SAHITHYA		(**Remember**)
		CO2	**Observe** the craft of the fiction writers (**Understand**)
		CO3	**Research** how the resource language is used as a medium in creative writing (**Understand**)
		CO4	**Analyze** the character sketches in the prescribed works (**Analyze**)
		CO5	**Judge** the novel on the basis of subject and relevance among contemporary Hindi novels (**Understand**)
EN 1121	**WRITINGS ON CONTEMPORARY ISSUES**	CO1	**Observe** and discuss the major contemporary issues in the world. (**Understand**)
		CO2	**Identify** the pertinent social issues that might evolve in the future. (**Apply**)
		CO3	**Analyse** the motives and causes of the current social issues. (**Analyze**)
		CO4	**Evaluate** literary texts critically. (**Evaluate**)
		CO5	**Develop** an empathy towards the issue of the society. (**Create**)
CG 1141	**READING POETRY**	CO1	**Identify** the various forms and types of poetry(**Remember**)
		CO2	**Explain** the stanza forms found in English poetry. (**Understand**)
		CO3	**Analyze** the poems critically(**Analyze**)
		CO4	**Critique** the strategies and poetic devices employed by the poet . (**Evaluate**)
		CO5	**Compose** a poem using the poetic devices learned. (**Create**)
CG 1131	**HISTORY OF ENGLISH LITERATURE 1**	CO1	**Examine** the cultural and social context of the time period through the study of medieval literature and drama. **(Remember)**
		CO2	**Discuss** the impact of Christianity on the Anglo-Saxon Heptarchy and the reassertion of British control. (**Understand**)
		CO3	**Explain** the different cultural beliefs and practices of the people in Britain during the Renaissance period. **(Apply)**
		CO4	**Analyze** the development of English drama, including miracle, morality, and mystery plays, and interludes, and identify their contributions to the theatrical tradition. **(Analyze)**
		CO5	**Evaluate** the English Reformation and Counter-reformation and its impact on society, literature, and religious practices. **(Evaluate)**
CJ 1131	**INTRODUCTION TO MASS COMMUNICATION**	CO1	**Explain** the need for using Mass Communication (**Understand**)
		CO2	**Understand** the significance of print media (**Remember**)
		CO3	**Classify** the different types of media used for Mass Communication (**Understand**)
		CO4	**Asses** the role of new media in disseminating mass messages (**Evaluate**)
		CO5	**Compose** messages to be circulated using mass media in accordance with the media laws (**Create**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1211.1	**ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT**	CO1	**Identify** the wide range of issues in environmental studies (**Remember**)
		CO2	**Interpret** ideas in the prescribed texts to develop an aesthetic approach towards nature. (**Understand**)
		CO3	**Develop** a set of values for environmental protection and conservation (**Apply**)
		CO4	**Analyze** natural disasters and other emergency situations. **(Analyze)**
		CO5	**Prepare** strategies to manage natural disasters and other emergency situations **(Create)**
EN 1212.1	**ENGLISH GRAMMAR USAGE AND WRITING**	CO1	**Identify** grammatical items and sentence structures of English grammar. (**Remember**)
		CO2	**Change** sentences using basic rules of English grammar. (**Apply**)
		CO3	**Test** grammatical competence at application level. (**Analyze**)
		CO4	**Find** errors in sentences and correct them. (**Evaluate**)
		CO5	**Develop** writing skills for special purposes and academic writing. (**Create**)
ML 1211.1	**GADYASAHITHYAM**	CO1	**Describe** the characteristics of renaissance age novels w.r.t prescribed novel (**Understand**)
		CO2	**Analyze** the different novel genres in Malayalam (**Analyze**)
		CO3	**Identify** major short story writers in Malayalam (**Remember**)
		CO4	**Explain** the historical development of Malayalam essays (**Understand**)
		CO5	**Analyze** social life through the study of personal history (**Analyze**)
HN 1211.1	**HINDI NIBANDH AUR ANYA GADYA**		**Recollect** the main works of the prescribed writers (**Remember**)
		CO2	**Relate** the contributions of prescribed writers (**Understand**)
		CO3	**Analyze** the craft used in the prescribed prose forms (**Analyze**)
			Discuss about the different type of prose **(Understand)**
			Prepare a prose form (**Create**)
CG 1241	**READING DRAMA**	CO1	**Describe** the verbal and visual language of drama **(Remember)**
		CO2	**Explain** various forms and schools of drama **(Understand)**
		CO3	**Develop** students' ability to critically evaluate subtle nuances of drama. **(Apply)**
		CO4	**Analyze** the students' ability to read, analyse and appreciate drama **(Analyze)**
		CO5	**Create** expertise in producing / performing drama. **(Create)**

CG 1231	**HISTORY OF ENGLISH LITERATURE 2**	CO1	**Examine** the socio-economic changes during the Eighteenth Century, including the enclosures, urbanization, and the rise of the middle class, and understand their impact on the literary climate of the period **(Remember)**
		CO2	**Discuss** the basic tenets of Romanticism and its significance as a literary and artistic movement **(Understand)**
		CO3	**Examine** the Enlightenment period, focusing on the rise of modern science and capitalism, and understand their influence on literature and society**. (Apply)**
		CO4	**Analyze** the socio-cultural issues addressed in the fiction of Jane Austen and Mary Shelley, including imperialism, Orientalism, and slavery, and analyze their works in relation to these themes**. (Analyze)**
		CO5	**Evaluate** the worksof representative writers from the Eighteenth Century, highlighting their contributions to the literary landscape of the time. **(Evaluate)**
CJ 1231	**HISTORY OF INDIAN MEDIA**	CO1	**Observe** the growth of journalism in India (**Remember**)
		CO2	**Establish** the role of Malayalam press in the freedom movement (**Apply**)
		CO3	**Discover** the luminaries of Malayalam journalism (**Understand**)
		CO4	**Analyze** the origin and development of broadcasting in India (**Analyze**)
		CO5	**Evaluate** the growth of new media in India (**Evaluate**)

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1311.1	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises. **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests**. (Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. **(Create)**
ML 1311.1	**ദൃശ്യകലാ സാഹിത്യം**	CO1	സാഹിത്യകൃതികളും ദൃശ്യകലകളും തമ്മിലുള്ള ബന്ധം മനസിലാക്കുന്നു
		CO2	കേരളീയ ദൃശ്യകലകൾ നിരീക്ഷിച്ച് സാമൂഹ്യ വൈജാത്യങ്ങൾ കണ്ടെത്താൻ സാധിക്കുന്നു
		CO3	സ്വന്തം കലാസൃഷ്ടി ഉണ്ടാക്കുകയും സ്വയം പരിശീലിച്ച് പ്രകടിപ്പിക്കാൻ കഴിവുണ്ടാകുകയും ചെയ്യുന്നു.
		CO4	എഴുത്ത്, അഭിനയം, സംവിധാനം തുടങ്ങിയ കലാപരമായ ഇടപെടലുകളിൽ സന്നദ്ധത കൈവരുന്നു.

		CO5	ആസ്വാദനകശ്ഷി ൈരർദ്ധിക്ക ക യും കലാരൂപങ്ങളെ ൈനിമർശ്നാത്മകമായി ൈനിലയിര ത്ത കയ ും ൈഴ്ന്ന
HN1311.1	**HINDI NATAK, VYAKARAN TATHA ANUVAD**	CO1	**Recall** the main works of the prescribed playwright (**Understand**)
		CO2	**Discuss** about how to translate a passage from English to hindi and vice versa (**Understand**)
		CO3	**Judge** the parts of speech and importance of translation (**Understand**)
		CO4	**Analyze** the craft and the relevance of the theme of the prescribed drama (**Apply**)
		CO5	**Identify** the nouns, pronouns, verbs, tenses (**Analyze**)
CG 1341	**READING FICTION**	CO1	**Define** the diverse fictional forms in prose. **(Remember)**
		CO2	**Analyze** and appreciate various fictional writings. **(Analyze)**
		CO3	**Develop** an insight into other cultures**. (Apply)**
		CO4	**Evaluate** fictional writings critically. **(Evaluate)**
		CO5	**Create** a work of fiction. **(Create)**
CG 1342	**2OTH CENTURY MALAYALAM LITERATURE IN ENGLISH TRANSLATION**	CO1	**Describe** the salient features of the works of major twentieth century Malayalam writers. **(Remember)**
		CO2	**Discuss** some of the major twentieth century Malayalam writers. **(Understand)**
		CO3	**Develop** a basic understanding of twentieth century Malayalam Writing. **(Apply)**
		CO4	**Analyze** and appreciate twentieth century Malayalam literature. **(Analyze)**
		CO5	**Analyze** and appreciate twentieth century Malayalam writers. **(Evaluate)**
CG 1331	**HISTORY OF ENGLISH LITERATURE 3**	CO1	**Describe** the life and conditions of people who lived during the Victorian age and twentieth century in Britain. **(Remember)**
		CO2	**Discuss** the various social and political organisations that influenced the Victorian age and twentieth century Britain. **(Understand)**
		CO3	**Explain** the different cultural beliefs and practices of the people in Britain during the age of Queen Victoria and in the twentieth century. **(Apply)**
		CO4	**Analyze** the different kinds of literary genres and styles emerged out of these ages. **(Analyze)**
		CO5	**Critique** the effect of the two world wars on the literature of the twentieth century. (**Evaluate**)
CJ 1331	**BASIS OF NEWS EDITING**	CO1	**Identify** news & events (**Remember**)
		CO2	**Trace** out different news story formats (**Understand**)
		CO3	**Develop** different types of reporting for print,

			electronic and online media **(Apply)**
		CO4	**Access** the duties and qualities of a responsible reporter. **(Evaluate)**
		CO5	**Write** balanced reports through objectivity, accuracy, and brevity **(Create)**

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1411.1	**READINGS IN LITERATURE**	CO1	**Identify** the style and literary devices employed in poetry. **(Remember)**
		CO2	**Develop** an appreciation of literary discourse. **(Apply)**
		CO3	**Analyze** literature as a cultural phenomenon.(**Analyze)**
		CO4	**Critique** the works prescribed for study. **(Evaluate)**
		CO5	**Develop** novel interpretations on literary texts using critical thinking. **(Create)**
ML 1411.1	**MALAYALAM, ASHAYAVINIMAYAM, SARGATHMAKARACHANA, BHASHAVABHODAM**	CO1	മലയാള ഭാഷയ ുടെ പ്രകയാഗരീത്ികളുക റിച്ച് അറിച ി ൊ് കനടന (**Understand**)
		CO2	ുത്റ്റ ില്ലാത്ത രീത്ിയിൽ ഭാഷ പ്രകയാഗ ിക്കാൻ വനപ ണി കനട ന (**Analyse**)
		CO3	ൊിൊർത്തന രെനകൾ നടത്തി ൊിലയിര ത്ത ന (**Evaluate**)
		CO4	എഴ ുത്ത കാര ുടെ സർഗജീൊിത ുത്ത ുാരത്മയാത്മകമായി ൊിലയിര ത്ത ന (**Evaluate**)
		CO5	പ ുത് രെനകൾ സൃഷ്ടിക്ക ന (**Create**)
HN1411.1	**HINDI KAVITA EVAM EKANKI**	CO1	**Recall** the works of the prescribed poets one act playwrights (**Remember**)
		CO2	**Evaluate** the contribution of poets of Bhakthi period & of modern poets.(**Analyze**)
		CO3	**Evaluate** the craft and relevance of subjects in the prescribed one-act plays.(**Analyze)**
		CO4	**Discuss** about the difference between drama and one act play (**Understand**)
		CO5	**Develop** the inactivity of students and discuss about the preparation of a poem (**Create**)
CG 1441	**READING PROSE**	CO1	**Describe** different types of prose writing. (**Remember**)
		CO2	**Explain** the salient features of periodical essays. (**Understand**)
		CO3	**Examine** different forms of life writing based on the

			works prescribed for study. (**Apply**)
		CO4	**Analyze** and appreciate modern prose. (**Analyze**)
		CO5	**Critique** the critical essays prescribed for study. (**Evaluate**)
CG 1321	**INFORMATICS**	CO1	**Describe** the history and development of computers. (**Remember**)
		CO2	**Identify** and describe different types of hardware and software. (**Understand**)
		CO3	**Apply** a comprehensive understanding of networking fundamentals to address real-world connectivity challenges. (**Apply**)
		CO4	**Explain** search engines and their use. (**Analyze**)
		CO5	**Assess** the impact of social networking on communication and information dissemination. (**Evaluate**)
EN 1431	**HISTORY OF ENGLISH LANGUAGE**	CO1	**Describe** and discussing origin and development of the English Language**. (Understand)**
		CO2	**Identify** the changes in different areas of the language **(Apply)**
		CO3	**Analyze** various language families. **(Analyze)**
		CO4	**Evaluate** the evolution of the English language**. (Evaluate)**
		CO5	**Infer** the changes in the different areas of the language. **(Create)**
CJ1431	**BASICS OF NEWS EDITING**	CO1	**Identify** the role of editors **(Understand)**
		CO2	**Describe** the relevance of editing a copy **(Remember)**
		CO3	**Classify** headlines based on stories and its relevance **(Apply)**
		CO4	**Analyze** the importance of editorial and its choice of subjects, arrangement and style of presentation. **(Analyze)**
		CO5	**Compose** a page based on the principles of page make-up and layout **(Create)**

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1541	**LITERARY CRITICISM**	CO1	**Discover** the historical overview of the critical practices from classical period to the present (**Understand**)
		CO2	**Examine** the critical concepts that emerged in different periods (**Remember**)
		CO3	**Explain** some of the significant concepts that had a seminal influence on the development of critical thought (**Apply**)
		CO4	**Analyze** and appreciate texts critically, from different perspectives (**Analyze**)
		CO5	**Facilitate** the creation of a critical perspective and capacity to relate and compare various critical practices

			and schools (**Create**)
EN 1542	**INDIAN WRITING IN ENGLISH**	CO1	**Recall** and identify key authors, works, and themes in Indian writing in English. (**Understand**)
		CO2	**Read** and appreciate Indian literature in English, interpreting its themes, messages, and socio-cultural implications. (**Remember**)
		CO3	**Apply** knowledge of the historical and cultural contexts to trace the development of Indian writing in English. (**Apply**)
		CO4	**Analyze** and evaluate the aesthetic qualities and literary techniques employed in Indian writing in English, demonstrating critical thinking and discernment. (**Analyze**)
		CO5	**Evaluate** and critique the representation of diverse voices, cultures, and identities in Indian writing in English, examining the portrayal of gender, class, caste, and other social constructs, and critically engaging with issues of representation and authenticity. (**Evaluate**)
EN 1544	**LINGUISTICS AND PHONETICS**	CO1	**Examine** language variation, register, and discourse to understand their impact on meaning and communication. **(Apply)**
		CO2	**Recall** and understand the key aspects of the English language, including grammar, vocabulary, syntax and semantics, demonstrating a solid foundation in linguistic knowledge **(Remember)**
			Examine language variation, register and discourse to understand their impact on meaning and communication. (**Apply**)
			Expalin and discuss key concepts in linguistics, such as phonetics, phonology, morphology, syntax, and sociolinguistics, demonstrating a comprehensive understanding and the ability to communicate complex ideas ina clear and concise manner (**Analyze)**
			Evaluate different linguistic frameworks, such as IC Analysis and PS Grammar, in terms of their theoretical terspectives and practical applications. (**Evaluate)**
CG 1542	**FILM STUDIES**	CO1	**Define** the key concepts in Film Studies. **(Remember)**
		CO2	**Describe** the language of cinema. **(Understand)**
		CO3	**Write** critically about films. **(Apply)**
		CO4	**Analyze** films as texts. **(Analyze)**
		CO5	**Critique** the history, art and culture of motion picture. **(Evaluate)**
EN 1545	**POST COLONIAL LITERATURES IN ENGLISH**	CO1	**Read** the socio-political contexts of colonialism and post colonialism to get good awareness.(**Remember**)
		CO2	**Discuss** colonial history to critique it .(**Understand**)
		CO3	**Analyse** the effects of colonialism in various nations (**Analyze**)
		CO4	**Evaluate** the key terms in Postcolonial thought (**Evaluate**)
		CO5	**Justify** the portrayal of race and gender dynamics in postcolonial literature.(**Create**)
EN 1551.1	**COMMUNICATIVE**	CO1	**Identify** the Career prospects and employability

	APPLICATIONS IN ENGLISH		(**Understand**)
		CO2	**Apply** their communicative skills in class room environment by ensuring participation in conversations, speeches and role plays. (**Apply**)
		CO3	**Analyze** communicative capabilities and to help the students overcome their hurdles in speaking English. (**Analyze**)
		CO4	**Evaluate** the grammar skills, with focus on accurate usage of the language in various contexts. (**Evaluate**)
		CO5	**Build** the students' overall soft skills and develop them as effective communicators. (**Create**)

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1641	**WORLD CLASSICS**	CO1	**Recognise** the diversity of cultures and the commonalities of human experience reflected in the literature of the world.(**Remember**)
		CO2	**Describe** the study and understanding of classics as a means of discovery and enquiry into the formations of great literary works and how the rich imagery of these classical works continues beyond 20th century.(**Understand**)
		CO3	**Develop** a fair knowledge in the various classical works from different parts of the world ,at different time periods across cultures.(**Apply**)
		CO4	**Analyse** oneself and one's culture through multiple frames of reference including the perception of others from around the world.(**Analyze**)
		CO5	**Develop** an aesthetic sense to appreciate and understand the various literary works with a strong foundation in the world classics.**(Create)**
EN 1641	**METHODOLOGY AND PERSPECTIVES OF HUMANITIES**	CO1	**Identify** the methodological issues specific to the humanities (**Understand**)
		CO2	**Recognize** the critical theories that can be used to analyse literary works (**Remember**)
		CO3	**Develop** a critical perspective in pursuing literary studies (**Apply**)
		CO4	**Explain** the key concepts in literary theory and criticism (**Analyze**)
		CO5	**Assess** literature from a theoretical perspective (**Evaluate**)
EN 1643	**ENGLISH FOR THE MEDIA**	CO1	**Identify** the types, nature and scope of the communication media (**Remember**)
		CO2	**Trace** the current trends in visual media (**Understand**)
		CO3	**Prepare** headlines and articles for newspapers and magazines and design their content (**Apply**)
		CO4	**Explain** the design and contents of webs, blogs and advertisements (**Analyze**).

		CO5	**Direct** the students with necessary writing procedures to produce and present scripts and programmes for Radio and TV (**Create**)
CG 1642	**WOMEN'S WRITING**	CO1	**Identify** the development of women's writing in various countries (**Understand**)
		CO2	**Apply** the female oriented theories to literature (**Apply**)
		CO3	**Analyze** the plurality of multiple experiences (**Analyze**)
		CO4	**Evaluate** the works from a feminist perspective (**Evaluate**)
		CO5	**Facilitate** the critical and creative skills to interrogate the biases in the construction of gender and patriarchal norms.(**Create**)
EN 1661.3	**CREATIVE WRITING**	CO1	**Identify** different poetic forms.(**Remember**)
		CO2	**Interpret** different works of literature (**Understand**)
		CO3	**Evaluate** writing skills and language proficiency (**Evaluate**)
		CO4	**Analyze** and appreciate poems and short stories (**Analyze**)
		CO5	**Write** book and film reviews.(**Create**)

DEPARTMENT OF PHYSICS

BSC PHYSICS AND COMPUTER APPLICATION

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1111.3	**LANGUAGE SKILLS**	CO1	**Define** the tenets of soft skills and the four-fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Develop** conversational skills through dialogue writings. (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)
HN1111.3	**HINDI GADYA SAHITYA**	CO1	**Recollect** the main works of the prescribed fiction writers (**Remember**)
		CO2	**Observe** the craft of the fiction writers (**Understand**)
		CO3	**Research** how the resource language is used as a medium in creative writing (**Understand**)
		CO4	**Analyze** the character sketches in the prescribed works (**Analyze**)
		CO5	**Judge** the novel on the basis of subject and relevance among contemporary Hindi novels (**Understand**)
ML1111.3	**PROSE LITERATURE**	CO1	**Identify** major literary figures in Malayalam literature (**Remember**)
		CO2	**Compare** the characteristics of novel and short story

			(**Understand**)
		CO3	**Explain** various genres of Malayalam prose writing (**Understand**)
		CO4	**Choose** correct usage of vocabulary (**Apply**)
			Analyze social life through the study of personal history **(Analyze)**
PC1121	**MECHANICS, THERMODYNAMICS AND PROPERTIES OF MATTER**	CO1	**Understand** and **Analyze** the dynamics of rigid bodies and **Apply** these concepts to solve the mechanics of the systems. **(Understand, Analyse, Apply)**
		CO2	**Discuss** the basic thermodynamic concepts and working of heat engines and refrigerators and **Solve** the problems related to various thermodynamic systems **(Understand, Apply)**
		CO3	**Analyze** and **Apply** the concept of elasticity in explaining the bending of structures. **(Analyze, Apply)**
		CO4	**Discuss** the properties of fluids and **Illustrate** their application. **(Understand, Apply)**
		CO5	**Discuss** different modes of transmission of heat and **Apply** it to our day to day life. **(Analyse, Apply)**
PC1171	**COMPUTER FUNDAMENTALS AND ORGANIZATION**	CO1	**Describe** the basic hardware components of computer system **(Understand).**
		CO2	**Compare** different memory units, storage devices and various architectures of control unit (**Understand**)
		CO3	**Illustrate** the concept of instruction set (**Understand**)
		CO4	**Discuss** input-output organization and different modes of data transfer (**Understand**)
		CO5	**Discuss** transfer Modes(**Understand**)
MM1131.6	**CALCULUS, INFINITE SERIES AND VECTOR ALGEBRA**		**Recall** basic concepts, techniques and standard results of differentiation, integration and vector algebra. (**Remember**).
			Illustrate special points of a function, curvature, Leibintz theorem, Rolle's theorem, mean value theorem and reciprocal vectors. (**Apply**)
			Compute mean value of function, length of curve, surface area of revolution and volume of revolution using integration. (**Apply**)
			Calculate limit of various series, approximation of error in Taylor series, scalar triple product, vector triple product and distance using vectors. (**Apply**)
			Explain reduction formulae, infinite and improper integral, plane polar coordinates and integral inequalities.(**Analyze**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1211.3	**ENGLISH GRAMMAR, USAGE AND WRITING**	CO1	**Identify** grammatical items and sentence structures of English grammar. (**Remember**)

		CO2	**Change** sentences using basic rules of English grammar. (**Apply**)
		CO3	**Test** grammatical competence at application level. (**Analyze**)
		CO4	**Find** errore in sentences and correct them (**Evaluate**)
		CO5	**Develop** writing skills for special purposes and academic writing. (**Create**)
ML1211.3	**DRISYAKALASAHITHYAM**	CO1	**Identify** major visual art forms of kerala (**Remember**)
		CO2	**Compare** the characteristics of attakkatha and thullal (**Understand**)
		CO3	**Explain** the development of screenplay (**Apply**)
		CO4	**Explain** the development of screenplay (**Apply**)
			Evaluate various art forms (**Evaluate)**
HN1211.3	**HINDI PADYA SAHITYA**	CO1	**Recollect** the major works of the prescribed poets (**Remember**)
		CO2	**Relate** the contributions of the poets (**Understand**)
		CO3	**Analyze** the craft used in ancient & modern poetry (**Analyze)**
		CO4	**Develop** the creative writing skills of students (**Apply**)
		CO5	**Classify** the meaning and characteristics of modern poetry(**Understand**)
PC1221	**INTRODUCTION TO PROGRAMMING**	CO1	**Explain** algorithms, flowchart and basic structure of C programming **(Understand)**
		CO2	**Construct** C programs using operators and control structures **(Apply)**
		CO3	**Apply** the concepts of arrays, pointers and functions in C language **(Apply)**
		CO4	**Illustrate** the use of string functions in C language **(Apply)**
		CO5	**Explain** the different file handling functions in C-language **(Apply)**
PC1241	**ENVIRONMENTAL STUDIES**	CO1	**Recognize** the role of an individual in conservation of natural Resources. **(Remember, Understand)**
		CO2	**Trace** the concept of an ecosystem. **(Understand, Apply)**
		CO3	**Explain** the causes, effects and control measures of pollution. **(Evaluate, Apply)**
		CO4	**Analyze** the biodiversity in our world.**(Analyze, Understand)**
		CO5	**Prepare** a project report based on an environmental issue. **(Understand, Analyse, Create)**
MM1231.6	**ANALYTIC GEOMETRY, INTEGRATION, DIFF. EQUATIONS & MATRICES**	CO1	**Recall** basic concepts of differentiation, integration, vectors and complex numbers. (**Remember**).
		CO2	**Explain** theorems of partial differentiation, differentiation and integration of vectors, chain rule, Taylor's theorem for many variable functions, space curves, vector functions of several arguments, surfaces-scalar and vector fields. (**Apply**)

		CO3	**Determine** combinations of grad, curl and div of a vector field, vector operators on sum and product of vectors, de Moivre's theorem, trigonometric identities, hyperbolic functions, double and triple integrals and general properties of Jacobians (**Apply**)
		CO4	**Compute** total differential and total derivative, stationary values under constraints, gradient of scalar field, curl and divergence of a vector field, n^{th} roots of unity, solution of polynomial equations, complex logarithm and powers and areas and volumes. (**Apply**)
		CO5	**Analyze** exact and inexact derivative, stationary values of many variable functions, cylindrical and spherical polar coordinates, applications to differentiation ,integration and multiple integrals, change of variables in multiple integrals and some special infinite integrals. (**Analyze**)

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1311.3	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises. **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests. **(Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. **(Create)**
PC1341	**ELECTRODYNAMICS**	CO1	**Discuss** the phenomena of electrostatics, related laws and their applications, potential of charges and their related equation and energy of charges. **(Apply, Evaluate)**
		CO2	**Discuss** on electrostatic field and polarisation in matter including dielectric and their related studies. **(Understand, apply)**
		CO3	**Discuss** the basic concepts and laws in magnetostatics and electromagnetic induction and their applications.**(Apply, Evaluate)**
		CO4	**Discuss** the Maxwell equations in different media and apply them to explain the nature and properties of electromagnetic waves and discuss the energy and momentum of electromagnetic waves. **(Apply)**
		CO5	**Discuss** the basic concepts and theorems related to electrical circuits and apply these concepts to solve and design various circuits. **(Apply, Create)**
CP1371	**MICROPROCESSOR AND PROGRAMMING**	CO1	**Define** the basic concepts and architecture of 8086 microprocessor**(Remember)**
		CO2	**Explain** about the instructions of 8086 microprocessor**(Understand)**

		CO3	**Explain** about the interrupts of 8086 microprocessor**(Understand)**
		CO4	**Develop** assembly language programs for various applications**(Create)**
		CO5	**Recognize** various advanced architectures of microprocessors.**(Remember)**
PC 1372	**DATA STRUCTURES**	CO1	**Distinguish** the different searching and sorting techniques. (**Analyze**)
		CO2	**Illustrate** the static and dynamic implementation of Stack and Queue data structures. (**Apply**)
		CO3	**Illustrate** the memory representation and different operations performed on linked list data structure. (**Understand**)
		CO4	**Explain** the operations performed on nonlinear data structures such trees and graphs (**Understand**)
		CO5	**Apply** the applications of stack data structure(**Apply**)
MM1331.6	**THEORY OF MATRICES, VECTOR INTEGRATION, DIFFERENTIAL EQUATIONS AND FOURIER SERIES**	CO1	**Define** Simple Harmonic Motion, Wave Motion, Periodic Functions and Ordinary differential equations. (**Remember**)
		CO2	**Discuss** Fourier Series, Average Value of a Function, Fourier Coefficients, Dirichlet Conditions, Complex Form of Fourier Series, Other Intervals, Even and Odd Functions, Parseval's Theorem, Fourier Transforms, Matrices and Determinants, Physical examples of line integrals Connectivity of regions - Green's theorem in a plane - Conservative fields and potentials Physical examples of surface integrals, Integral forms for grad, div and curl - Green's theorems, Other related integral theorems , Physical applications of the divergence theorem ,Stokes theorem and related theorems ,Related integral theorems - Physical Applications. (**Understand**)
		CO3	**Solve** First Order Ordinary Differential Equations, Exact ODEs. Integrating Factors - Linear ODEs - Bernoulli Equation - Orthogonal Trajectories - Homogeneous Linear ODEs with Constant Coefficients - Euler Cauchy Equations, Non-homogeneous ODEs.(**Create**)
		CO4	**Explain** Row Reduction, Cramer's Rule for solving system of equations - Vectors - Lines and Planes - Linear Combinations - Linear Functions - Linear Operators - Linear Dependence and Independence - Special Matrices like Hermitian matrices and Formulas - Linear Vector Spaces - Eigenvalues and Eigenvectors - Diagonalizing Matrices - Applications of Diagonalization. (**Apply**)
		CO5	**Evaluate** Evaluating Line integrals, Line integrals with respect to a scalar Surface integrals, surface integrals -

			Vector areas of surfaces ,Volume integrals - Volumes of three-dimensional regions (**Evaluate**)

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN1411.3	**READINGS IN LITERATURE**	CO1	**Identify** the style and literary devices employed in poetry. (**Remember**)
		CO2	**Critique** the works prescribed for study. (**Evaluate**)
		CO3	**Analyze** literature as a cultural phenomenon. (**Analyze**)
		CO4	**Develop** novel interpretations using critical thinking. (**Create**)
		CO5	**Develop** an appreciation of literary discourse **(Apply)**
PC1441	**CLASSICAL MECHANICS AND THEORY OF RELATIVITY**	CO1	Discuss the basic concepts simple harmonic motion and derive the equation for different situations **(Apply)**
		CO2	Discuss the fundamentals of central force, law related to orbital motion and their application **(Apply)**
		CO3	Discuss the basic concepts of Lagrangian approach, its comparison to Newtonian mechanism, D'Alembert's principle and their application. . **(Apply)**
		CO4	Explain the special theory of relativity, various transformation of coordinates with frame of reference **(Apply)**
		CO5	Understand and analyse the phenomenons related to theory of relativity. **(Apply, Analyse)**
PC1442	**OPTICS**	CO1	Discuss the basic concepts of superposition interference and analyse the concepts using practical systems **(Apply, Analyse)**
		CO2	Discuss electrostatic field and polarization in matter including dielectric and solve problems based on this **(Understand, apply).**
		CO3	Discuss the basic concept of diffraction,analyse the concepts and discuss the working of different optical devices. (**Apply, Analyse, Create)**
		CO4	Explain the principles, dispersion and polarization and their applications. **(Understand, Apply)**
		CO5	Discuss the basic concepts of Laser and their working principle and explain communication by fibre optics. **(Understand, Apply)**
PC1471	**SOFTWARE ENGINEERING**	CO1	Describe the principles of the engineering processes in software development (**Understand**)
		CO2	**Illustrate** different project estimation techniques. (**Apply**)
		CO3	**Analyze** the requirements for the software projects.

			(**Analyze**)
		CO4	**Design** the requirements of the software projects using function oriented and object-oriented approach. (**Create**)
		CO5	**Describe** the different levels of testing, software quality assurance and maintenance (**Understand**)
PC1472	**OBJECT ORIENTED PROGRAMMING USING C++**	CO1	**Explain** the concepts of OOP and the basic structure of C ++ programming **(Understand)**
		CO2	**Apply** the concept of classes, objects, friend functions, constructors, destructors and operator overloading **(Apply)**
		CO3	**Develop** C++ programs using the concept of inheritance and dynamic memory allocation **(Apply)**
		CO4	**Construct** C++ programs using the concept of polymorphism, I/O and file management and exception handling. **(Apply)**
		CO5	**Illustrate** the object oriented programming concepts using real world examples.**(Analyze)**
MM1431.6	**ABSTRACT ALGEBRA, LAPLACE TRANSFORMS, SPECIAL FUNCTIONS AND FUNCTIONS OF A COMPLEX VARIABLE**	CO1	**Explain** Groups, Subgroups, Finite Groups, Cyclic Groups, Rings, Integral Domains, Fields, Gamma Function, Analytic Function. (**Understand**)
		CO2	**Discuss** Elementary Properties of Groups and Cyclic Groups, The Factorial Function, Functions of a Complex Variable, Cauchy's Theorem, The Residue Theorem, Residues at Infinity (**Understand**)
		CO3	**Solve** problems using Laplace Transforms, Elementary Functions Translation and Convolution Theorem. (**Apply**)
		CO4	**Explain** Limits of Integration Unit Step Function, Inverse Transform, Partial Fraction Expansion, Laplace Transforms of Derivatives, Inverse Laplace Transforms, Recursion Relation, Some Important Formulas Involving Gamma Functions, Beta Functions, Cauchy-Riemann Relations Methods of Finding Residues (**Apply**)
		CO5	**Evaluate** Gamma Function of Negative Numbers, Beta Functions in Terms of Gamma Functions, Definite Integrals by use of The Residue Theorem, Contour Integrals, Cauchy's Integral Formula, Laurent Series (**Evaluate**)

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
PC 1541	**ELECTRONICS**	CO1	**Get** basic ideas about the theory of semiconductors and understand the basics of p-n junction and different diodes **(Understand, Apply)**
		CO2	**Interpret** the construction, characteristics and working

			of BJT and evaluate its applications in different electronic circuits. **(Analyse, Apply)**
		CO3	**Understand** the basics of different types of power amplifiers and oscillators and analyse their applications **(Understand, Analyse)**
		CO4	**Understand** the principles of modulation and communication and their applications in various fields **(Understand, Apply)**
		CO5	**Simplify** Boolean expressions and construct binary adder, subtractor and flip flops using logic gates **(Apply, Analyse)**
PC1542	**ATOMIC AND NUCLEAR PHYSICS**	CO1	**Understand** different atoms models evaluating the numerical problems related to the same **(Understand, Apply)**
		CO2	**Get** an idea about the atomic spectra. and apply these concepts to solve problems relating various atomic spectra **(Understand, Apply)**
		CO3	**Understand** and analyse different nuclear models and analysing their properties **(Understand, Analyse)**
		CO4	**Analyze** practical applications of different nuclear reactions and analysing their holocaust **(Understand, Analyse)**
		CO5	**Attain** phenomenological understanding of elementary particles, their fundamental interactions and analysis of quark model related to nuclear physics **(Understand, Evaluate)**
PC 1571	**DATABASE MANAGEMENT SYSTEMS**	CO1	**Explain** the concept of database, relational data model and its operation.**(Understand)**
		CO2	**Develop** skills to design an ER diagram. **(Create)**
		CO3	**Create** database and perform operations using SQL. **(Create)**
		CO4	**Illustrate** functional dependencies **(Apply)**
		CO5	**Illustrate** normalization procedures in database**(Apply)**

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
PC1671	**COMPUTER NETWORKS & SECURITY**	CO1	**Describe** about computer networks and data communication (**Understand**)
		CO2	**Explain** different models and its comparison (**Understand**)
		CO3	**Illustrate** different techniques for error detection and correction (**Apply**)
		CO4	**Determine** the different routing algorithms for routing (**Apply**)
		CO5	**Explain** the concepts of cryptography, authentication systems and various security measures in web, email

			and network systems. (**Analyze**)
PC1641	**SOLID STATE PHYSICS**	CO1	**Analyze** crystal structure and applying the theory for the elucidation of crystal structure of unknown crystal **(Understand,Apply, Analyse)**
		CO2	**Understand** different diffraction techniques and their applications. **(Understand, apply)**
		CO3	**Understand** and analyse the free electron theory of metals and their comparison to kinetic theory of gases, explaining various properties of metals thermodynamically **(Understand, Analyse, Apply)**
		CO4	**Compare** different specific heat models for metals and analysing band theories **(Analyze)**
		CO5	**Able** to understand and analyse the phenomena of superconductivity and its applications. **(Understand, Analyze)**
PC1672	**OPERATING SYSTEMS**	CO1	**Describe** the different types of OS, its components and services and types of system programs. (**Understand**)
		CO2	**Illustrate** the process management concepts and its scheduling algorithms. (**Apply**)
		CO3	**Demonstrate** the different memory management and protection concepts (**Apply**)
		CO4	**Illustrate** the structure and allocation methods of storage systems and I/O hardware (**Apply**).
		CO5	**Describe** IO systems and its specifications**(Understand)**
PC1642	**STATISTICAL PHYSICS AND QUANTUM MECHANICS**	CO1	**Understand** information about the basics of statistical physics and their applications **(Understand, Analyse)**
		CO2	**Understand** and comparing three statistical distributions and judge which distribution applies to a given system **(Understand, Apply)**
		CO3	**Discuss** the emergence of quantum mechanics and identify the quantum mechanical concepts applicable to Physical systems **(Understand, Apply)**
		CO4	**Solve** stationary states like infinite square well, harmonic oscillator and free particle **(Apply)**
		CO5	**Apply** the concepts of Quantum Mechanics to solve problems and derive Equations of motion of Physical systems using quantum concepts **(Apply)**
PC1661.1	**ASTRONOMY AND ASTROPHYSICS**	CO1	**Familiarize** and appreciate the field of astronomy **(Understand)**
		CO2	**Comprehend** astronomical scales and basic concepts of positional astronomy and can understand about stellar parameters and spectral classification. **(Understand, Apply)**
		CO3	**Understand** basic information about the formation of stars, their magnitudes and luminosity and understand the structure of sun **(Remember, Understand)**
		CO4	**Describe** the classification of stars, stellar evolution, interstellar matter, galaxies etc and understand the origin of the Planets **(Understand)**
		CO5	**Explain** Earth's motion in space;rotation and revolution,predict seasons using diagram of Earth and sun,Describe what causes seasons **(Understand,**

			Analyse)

DEPARTMENT OF MEDIA STUDIES

BA JOURNALISM AND MASS COMMUNICATION

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1111.1	**LANGUAGE SKILLS**	CO1	**Define** the tenets of soft skills and the four-fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Developing conversational** skills through dialogue writings (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)
ML 1111.3	**GADYA SAHITHYAM**	CO1	**Identify** major literary figures in Malayalam literature (**Remember**)
		CO2	**Compare** the characteristics of novel and short story (**Understand**)
		CO3	**Explain** various genres of Malayalam prose writing (**Understand**)
		CO4	**Choose** correct usage of vocabulary (**Apply**)
		CO5	**Analyze** social life through the study of personal history (**Analyze)**
HN1111.3	**HINDI GADYA SAHITHYA**	CO1	**Distinguish** between different forms of Hindi literature (**Understand**)
		CO2	**Explain** the craft in short story, one act play, and essay. (**Apply**)
		CO3	**Judge the** craft in satire, autobiography, and sketch (**Apply**)
		CO4	**Represent** the contributions of prescribed writers to Hindi literature (**Understand**)
		CO5	**Relate** the different works of prescribed writers (**Understand**)
JC 1121	**METHODOLOGY AND THEORIES OF**	CO1	**Sketch** the theoretical framework of communication in media (**Apply**)

	MASS COMMUNICATION		
		CO2	**Describe** various perspectives of media content in different types of media (**Remember**)
		CO3	**Examine** the concept of communication in mass media (**Apply**)
		CO4	**Explain** 'media effects' and their practice in media (**Analyze**)
		CO5	**Integrate** the perspectives of Media Content in different context.(**Create**)
JC 1141	**INTRODUCTION TO MASS COMMUNICATION**	CO1	**Define** communication, process and types of communication (**Remember**)
		CO2	**Illustrate** the characteristics and functions of mass communication (Understand)
		CO3	**Discuss** models of communication and its impact on society (**Understand**)
		CO4	**Trace** the history of journalism and growth of communication technology (**Understand**)
		CO5	**Formulate** communicate messages through different mass media (**Create**)
JC 1142	**REPORTING**	CO1	**Identify** news and events (**Understand**)
		CO2	**Write** types of reporting on both print and electronic media (**Create**)
		CO3	**Report** news and operate newsrooms. (**Apply**)
		CO4	**Construct** news story according to the format for print, broadcast & online (**Create**)
		CO5:	**Evaluate** one's work and the work of others for accuracy, fairness, clarity, style and correctness (**Analyze**)
JC 1171	**EDITING**	CO1	**Describe** the relevance of editing a copy (**Remember**)
		CO2	**Practice** headlines based on stories and its relevance (**Apply**)
		CO3	**Evaluate** the editorial content in a newspaper (**Analyze**)
		CO4	**Compose** a page based on the principles of page design and lay-out (**Create**)
		CO5	**Plan** and writ editorial content (**Create**)
ML 1131	**SARGATHMAKA RACHANA: THATHWAVUM AVISHKARAVUM**	CO1	**Describe** various levels of creative writing (**Remember**)

		CO2	**Construct** story, poems, novel, drama and reviews (**Create**)
		CO3	**Develop** different styles of creative writing (**Create**)
		CO4	**Compose** various forms of literary writing (**Create**)
		CO5	**Structure** a form of literature into another form (**Create**)

SEMESTER 2

EN – 1211.3	**ENGLISG , GRAMMAR, USAGE AND WRITING**	CO1	**Identify** grammatical items and sentence structures of English grammar. **(Remember)**
		CO2	**Change** sentences using basic rules of English grammar**. (Apply)**
		CO3	**Test** grammatical competence at application level. **(Analyze)**
		CO4	**Find** errors in sentences and correct them **(Evaluate)**
		CO5	**Develop** writing skills for special purposes and academic writing. **(Create)**
ML1211.3	**DISHYAKALA SAAHITHYAM**	CO1	**Identify** major visual art forms of Kerala **(Remember)**
		CO2	**Compare** the characteristics of attakkatha and thullal **(Understand)**
		CO3	**Explain** various genres of malayalam drama **(Understand)**
		CO4	**Explain** the development of screenplay **(Apply)**
		CO5	**Evaluate** various art forms (**Evaluate)**
HN1211.3	**HINDI PADYA SAHITYA**	CO1	**Recollect** the major works of the prescribed poets.(**Remember**)
		CO2	**Analyze** the craft used in ancient and modern poetry **(Analyze)**
		CO3	**Relate** the contributions of the prescribed poets **(Understand)**
		CO4	**Classify** the meaning and characteristics of modern poetry**.(Understand)**
		CO5	**Develop** the creative writing skills of students **(Apply)**
JC 1241	**INTRODUCTION TO ENVIRONMENTAL STUDIES**	CO1	**Identify** the scope and importance of environment **(Remember)**

		CO2	**Classify** and discuss the various resources in the environment **(Understand)**
		CO3	**Analyze** the structure and functions of eco system **(Analyze)**
		CO4	**Examine** biodiversity and apply its conservation methods **(Apply)**
		CO5	**Evaluating** sustainable development initiatives **(Evaluate)**
JC 1271	**BASICS OF AUDIO–VISUAL COMMUNICATION**	CO1	**Produce** audio and visual media content **(Create)**
		CO2	**Evaluate** the components of audio visual communication **(evaluate)**
		CO3	**Trace** out the knowledge in the fundamentals of graphics**(Understand)**
		CO4	**Identify** the nature, scope and process of various types of audio - visual communication**(Remember)**
		CO5	**Facilitate** hands-on experience of the basics of audio- visual communication such as photography, cinema ,TV Production and digital media.(**Create**)
ML 1231	**MADHYAMA RACHANA:THATHWAVUM AAVISHKARAVUM**	CO1	**Acquire** knowledge about Newspaper Writing (**Understand**)
		CO2	**Analyze** diversities in Radio programmes(**Evaluate**)
		CO3	**Create** interest in Screenplay Writing(**Create**)
		CO4	**Develop** Script Writing skills**(Apply)**
		CO5	**Learn** the technical aspects of Film Production(**Remember**)

SEMESTER 3

EN 1311.3	**ENGLISH FOR CAREER**	CO1	**Practice** the vocabulary essential for professional communication. (**Apply**)
		CO2	**Construct** sentences without errors using remedial grammar. (**Create**)
		CO3	**Analyze** passages for comprehension using logical and critical thinking. (**Analyze**)
		CO4	**Recall** the grammatical and syntactical rules by solving remedial exercises. **(Remember)**

		CO5	**Test** vocabulary, grammar, comprehension & remedial English from the perspective of career oriented test. **Evaluate)**
JC 1321	**RADIO BROADCASTING**	CO1	**Describe** the evolution of radio (**Remember**)
		CO2	**Classify** the different frequency spectrum (**Understand**)
		CO3	**Produce** programmes in different radio formats (**Create**)
		CO4	**Explain** radio newsroom operations and news format (**Analyze**)
		CO5	**Assess** programme recording softwares in radio (**Evaluate**)
JC1341	**MAGAZINE JOURNALISM**	CO1	**Recognise** various writing styles in Magazine Journalism.(**Remember**)
		CO2	**Identify** apt topic to be chosen for write ups(Remember and **Understand**)
		CO3	C**reate** content, do editing and picture selection which is apt for the story (**Create**)
		CO4	D**esign** cover page and magazine using InDesign.(**Create**)
		CO5	**Complete** magazine and publish (**Apply**)
JC 1371	**PHOTO JOURNALISM**	CO1	**Explain** the fundamentals of photography(**Apply**)
		CO2	**Differentiate** types of photographs (**Analyze**)
		CO3	**Create** images and practice the art of photography (**Create**)
		CO4	**Develop** skills for photography(**Create**)
		CO5	**Discuss** the history of Photography, moving images and Photo Journalism (**Understand**)
JC1372	**INTRODUCTION TO TELEVISION PRODUCTION**	CO1	**Report** events and news based stories using mobile phones and video cameras (**Apply**)
		CO2	**Edit** offline and online programmes of television by using the required software (**Apply**)
		CO3	**Identify** the concepts of filming, lighting and sound in television production (U**nderstand**)
		CO4	**Write** scripts of TV news stories, special stories and on spot reporting (**Create**)
		CO5	**Produce** short video productions using mobile phones and video cameras (**Create**)
EN 1331.3	**CREATIVE WRITING**	CO1	**Identify** different poetic forms (**Remember**)

		CO2	**Interpret** different works of literature (**Understand**)
		CO3	**Evaluate** writing skills and language proficiency (**Evaluate**)
		CO4	**Analyze** and appreciate poems & short stories (**Analyze**)
		CO5	**Write** book and film review (**Create**)

SEMESTER 4

EN1411.3	**READINGS IN LITERATURE**	CO1	**Identify** the style and literary devices employed in poetry.(**Remember**)
		CO2	**Develop** an appreciation of literary discourse (**Apply**)
		CO3	**Analyze** literature as a cultural phenomenon (**Analyze**)
		CO4	**Critique** the works prescribed for study.(**Evaluate**)
		CO5	**Develop** novel interpretations on literary texts using critical thinking(**Create**)
JC 1441	**PR & CORPORATE COMMUNICATION**	CO1	**Explain** the PR and Corporate communication (**Understand**)
		CO2	**Identify** Propaganda , Publicity and advertising techniques (**Analyze**)
		CO3	**List** professional organisations in PR and Corporate communication in public and private sector (**Remember**)
		CO4	**Access** PR campaigns and crisis management (**Evaluate**)
		CO5	**Design** Media and community relations content (**Create**)
JC 1442	**ADVERTISING**	CO1	**Describe** what advertising is and what it does. (**Remember**)
		CO2	**Explain** the knowledge of economy and social aspects of advertisements (**Evaluate**)
		CO3	**Outline** the effects of advertising on society (**Understand**)
		CO4	**Use** the various elements in advertising (**Apply**)
		CO5	**Plan** the making of advertising (**Create**)
JC 1471	**INTRODUCTION TO CINEMA**	CO1	**Restate** the fundamentals of Film Language (**Understand**)
		CO2	**Find** genres of film (**Remember**)
		CO3	**Design** a film Production (**Create**)

		CO4	Identify different film movements (**Analyze**)
		CO5	**Teach** the way content, form, and contexts work together to create meaning in film. (**Apply**)
JC 1472	**TELEVISION BROADCASTING**	CO1	**Discuss** the characteristics of television(**Understand**)
		CO2	Write basics for television programme (**Remember**)
		CO3	**Plan** and sketch the essentials of broadcasting (**Create**)
		CO4	**Classify** television genres (**Apply**)
		CO5	**Rate** the current trends in television broadcasting (**Evaluate**)
EN 1431.3	**ENGLISH FOR THE MEDIA**	CO1	**Identify** the types, nature and scope of the communication media (**Remember**)
		CO2	**Prepare** headlines and articles for newspapers and magazines and design their content (**Apply**)
		CO3	**Directing** the students with necessary writing procedures to produce and present scripts and programmes for Radio and TV (**Create**)
		CO4	**Explain** the design and contents of webs, blogs and advertisements (**Analyze**).
		CO5	**Trace** the current trends in visual media (**Understand**)

SEMESTER 5

JC 1541	**MALAYALAM JOURNALISM (CORE COURSE 7)**	CO1	**Explain** the history of Malayalam press (**Understand**)
		CO2	**Recognise** the present status of the newspapers and magazines in Malayalam. (**Remember**)
		CO3	**Identify** the process of translation and syndication in news (**Remember** and **Understand**)
		CO4	**Design** various writing styles in Magazine Journalism in Malayalam.(**Create**)
		CO5	**Develop** strong foundation in Malayalam Journalism and empower with a national perspective.(**Apply**)
JC 1542	**MASS MEDIA MANAGEMENT(CORE COURSE)**	CO1	**Recognise** the modern management concepts(**Remember**)
		CO2	**Apply** the managerial aspects and functions of mass media organizations(**Apply**)
		CO3	**Identify** the organisational structure(**Understand**)

		CO4	**Identify** the business challenges and to tackle them in media organizations.(**Understand**)
		CO5	**Describe** the ownership pattern(**Remember**)
JC 1543	**MEDIA LAWS AND ETHICS (CORE COURSE 9)**	CO1	**Explain** and incorporate legal framework(**Understand**)
		CO2	**Sketch** concepts of freedom of press and the constitution (**Apply**)
		CO3	**Differentiate** the judicial structure and role of fourth estate (**Understand**)
		CO4	**Associate** media ethics and code of ethics (**Understand**)
		CO5	**Compare** Censorship and self regulations (**Understand**)
JC1571	**DOCUMENTARY FILM (VOCATIONAL COURSE 7)**	CO1	**Explain** theoretical knowledge on historical evolution of documentary films (**Remember**)
		CO2	**Trace** the current trends in documentary genre (**Understand**)
		CO3	**Explain** the importance of the creative use of visuals and sounds (**Apply**)
		CO4	**Practice** the editing techniques used (**Apply**)
		CO5	**Produce** and familiarise documentary making (**Apply**)
JC 1572	**VIDEO PROJECT (PRACTICALS)(VOCATIONAL COURSE 8)**	CO1	**Identify** an idea which could be developed into a story (**Remember**)
		CO2	**Plan** and prioritize according to the different phases of production process(**Create**)
		CO3	**Develop** treatment and script that is suitable for an idea(**Create**)
		CO4	**Produce** an original documentary film (**Apply**)
		CO5	**Examine** the way that content, form, and contexts work together to create meaning in documentary Film. (**Remember**)
JC1551.1	**FILM APPRECIATION(OPEN COURSE 1**	CO1	**Create** insight into the evolution cinema and its origin (**Create**)

	)		
		CO2	**Illustrate** the fundamentals of Film Language (**Apply**)
		CO3	**Interpret** the contributions of pioneer in cinema (**Understand**)
		CO4	**Design** a film Production (**Create**)
		CO5	**Observe** different genres of film (**Remember**)

SEMESTER 6

JC 1641	**BUSINESS JOURNALISM**	CO1	**Explain** the evolution of economic thinking and its current perspectives (**Understand**)
		CO2	**Recognise** economic news based on Recota and figures. (**Remember**)
		CO3	**Sketch** the present business reports .(**Apply**)
		CO4	**Record** and present budget report for visual media (**Apply**)
		C05	**Illustrate** a business newspaper (**Analyze**)
JC 1642	**INTRODUCTION TO NEW MEDIA**	CO1	**Explain** the idea of convergence of media and its application in journalism (**Understand**)
		CO2	**Sketch** the working pattern of electronic and media platforms(**Apply**)
		CO3	**Describe** the societal and cultural impacts of new media (**Understand**)
		CO4	**Assess** the suitability of hardware, software including open source solutions and applications of computer technologies and web page design (**Evaluate**)
		CO5	**Create** a social media post and upload original content (**Create)**
JC 1643	**ADVANCED TELEVISION PRODUCTION**	CO1	**Identify** various television formats (**Analyze**)
		CO2	**Prepare** on-screen presentation (**Apply**)
		CO3	**Design** video production, single camera and multi camera operations. (**Create**)

		CO4	**List** various directorial skills(**Remember**)
		CO5	**Teach** the ability to package the show according to television requirements (**Apply**)
JC 1671	**DEVELOPMENT COMMUNICATIO N**	CO1	**Define** different paradigms of development. (**Remember**)
		CO2	**Familiarise** different programs and policies of the development communication (**Understand**)
		CO3	**Explain** development communication campaigns. **(Understand)**
		CO4	**Examine** issues in development communication. **(Analyze)**
		CO5	**Interpret** the role of development agencies in development. (**Evaluate**)
JC 1672	**MEDIA AND SOCIETY**	CO1	**Identify** the role of media in society (**Understand**)
		CO2	**Interpret** mass society and media culture (**Understand**)
		CO3	**Appraise** the importance of Mass media and civil society (**Evaluate**)
		CO4	**Explain the issues pertaining in mass media practices (Analyze)**
		CO5	**Review** and write the movements of digital media and social change (**Evaluate**)
JC 1661.2	**MULTIMEDIA PRODUCTION**	CO1	**Distinguish** visual language and principles of Multimedia production (**Understand**)
		CO2	**Choose** the proper design techniques for the programmes (**Apply**)
		CO3	**Practice** audition, sound booth operation and softwares required for multimedia projects (**Apply**)
		CO4	**Identify** various elements involved in a multimedia production (**Remember**)
		CO5	**Develop** multimedia applications **(create & Apply)**

DEPARTMENT OF MATHEMATICS

BSC MATHEMATICS

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
MM 1141	**METHODS OF MATHEMATICS**	CO1	**Recall** basic concepts and standard results of differentiation and integration. (**Remember**)
		CO2	**Illustrate** the rate of changes, absolute maximum and minimum and its geometrical interpretation. (**Understand**)
		CO3	**Compute** work done, centre of gravity, fluid force and other length related concepts like area and volume using integration. (**Apply**)
		CO4	**Establish** the relation between position - time, work and energy, density and mass of objects. (**Apply**)
		CO5	**Explain** Rolle's theorem, Mean value theorem, L'Hopital's rule, Pappus theorem and related problems and analyse hyperbolic function and improper integrals. (**Analyze**)
ST 1131.1	**DESCRIPTIVE STATISTICS**	CO1	**Explain** functions, Scopes and Limitations of Statistics & various scales of measurements. (**Understand**)
		CO2	**Apply** different statistical tools to collect, present and summarize data. (**Apply**)
		CO3	**Identify** the nature of a frequency distribution of a given data. (**Apply**)
		CO4	**Determine** descriptive statistical measures for data. (**Apply**)
		CO5	**Apply** statistical tools for prediction – Fitting, Correlation & regression. (**Apply**)
PY 1131.1	**MECHANICS AND PROPERTIES OF MATTER**	CO1	**Understand** and apply the dynamics of rigid bodies. **(Understand, Apply)**
		CO2	**Interpret** and **analyse** the concept and applications of oscillations in the classical field. **(Apply, Analyse).**
		CO3	**Apply** the concept of elasticity in explaining the bending of structures. **(Apply)**
		CO4	**Evaluate** the properties of fluids and illustrate their application. **(Apply)**

		CO5	**Understand** the concept and applications of viscosity **(Apply)**
EN 1111.1	**LANGUAGE SKILLS**	CO1	**Defining** the tenets of Soft skills and the four fold skills. **(Remember)**
		CO2	**Explain** elements of basic communication through micro and macro skills **(Understand)**
		CO3	**Developing** conversational skills through dialogue writings. **(Apply)**
		CO4	**Analyse** the students' ability as a critical reader and writer. **(Analyze)**
		CO5	**Create** expertise in business and professional writing to endorse employability. **(Create**
EN 1121	**WRITINGS ON CONTEMPORARY ISSUES**	CO1	**Observe** and discuss the major contemporary issues in the world. (**Understand**)
		CO2	**Identify** the pertinent social issues that might evolve in the future. (**Apply**)
		CO3	**Analyse** the motives and causes of the current social issues. (**Analyze**)
		CO4	**Evaluate** literary texts critically. (**Evaluate**)
		CO5	**Develop** an empathy towards the issue of the society. (**Create**)
ML 1111.1	**MALAYALAM KAVITHA**	CO1	**Describe** the characteristics of early stage Malayalam poetry w.r.t classic translation. (**Understand**)
		CO2	**Analyze** the different poetry genres in Malayalam. (**Analyze**)
		CO3	**Identify** major poets in Malayalam. (**Remember**)
		CO4	**Explain** the historical development of Malayalam poetry. (**Understand**)
		CO5	**Prepare** Poetry Review (**Evaluate**)
HN 1111.1	**HINDI KATHA SAHITYA**	CO1	**Recall** the main works of the prescribed fiction writers (**Remember**)
		CO2	**Observe** the craft of the fiction

			writers(**Understand**)
		CO3	**Research** how the resource language is used as a medium in creative writing (**Understand**)
		CO4	**Analyze** the character sketches in the prescribed works (**Analyze**)
		CO5	**Judge** the novel on the basis of subject and relevance among contemporary Hindi novels (**Understand**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1211.1	**ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT**	CO1	**Identify** the wide range of issues in Environmental studies. **(Remember)**
		CO2	**Interpret** ideas in the literary texts to develop an aesthetic approach towards nature.**(Understand)**
		CO3	**Develop** a set of values for environmental protection and conservation. **(Apply)**
		CO4	**Analyze** natural disasters and other emergency situations. **(Analyze)**
		CO5	**Prepare** strategies to manage natural disasters and other emergency situations. **(Create)**
EN 1212.1	**ENGLISH GRAMMAR, USAGE AND WRITING**	CO1	**Identify** grammatical items and sentence structures of English grammar. **(Remember)**
		CO2	**Interpret** ideas in the literary texts to develop an aesthetic approach towards nature.**(Understand)**
		CO3	**Develop** a set of values for environmental protection and conservation. **(Apply)**
		CO4	**Analyze** natural disasters and other emergency situations. **(Analyze)**
		CO5	**Prepare** strategies to manage natural disasters and other emergency situations.**(Create)**

HN 1211.1	**HINDI NIBANDH AURANYA GADYA VIDHAYEM**	CO1	**Recall** the main works of the prescribed writers (**Remember**)
		CO2	**Relate** the contributions of prescribed writers(**Understand**)
		CO3	**Discuss** about the different types of prose. (**Understand**)
		CO4	**Analyse** the craft used in the prescribed prose forms **(Analyze)**
		CO5	**Create** a prose form and try to improve. **(Create)**
ML 1211.1	**GADYASAHITHYAM**	CO1	**Describe** the characteristics of renaissance age novels w.r.t prescribed novel (**Understand**)
		CO2	**Analyze** the different novel genres in Malayalam(**Analyze**)
		CO3	**Identify** major short story writers in Malayalam(**Remember**)
		CO4	**Explain** the historical development of Malayalam essays (**Understand**)
			Analyze social life through the study of personal history (**Analyse)**
MM 1221	**FOUNDATIONS OF MATHEMATICS**	CO1	**Describe** basic concepts of sets, relations, functions, parametric equations and basic operations on vectors. (**Remember**).
		CO2	**Identify** the way in which a mathematician formally makes statements and proves or disproves it. (**Understand**)
		CO3	**Illustrate** arc length of parametric curves, area, families of lines and curves, various quadric surfaces and projections of vectors. (**Apply**)
		CO4	**Explain** difference between polar, spherical and cylindrical coordinates, conics in standard and translated positions, reflections and rotation of conics. (**Apply**)
		CO5	**Analyze** various techniques of proof, methods for conversion between various coordinate systems**,** Kepler's laws. (**Analyze**)

ST 1231.1	**PROBABILITY AND RANDOM VARIABLES**	CO1	**Explain** random experiment and concept of probability in different perspectives. (**Understand**)
		CO2	**Compute** conditional probability and apply for finding posterior probabilities. (**Apply**)
		CO3	**Explain** random variables and their distribution functions(**Apply**)
		CO4	**Explain** transformation of random variables(**apply**)
		CO5	**Compute** expectations and write moment generating functions of random variables. (**Apply**)
PY1231.1	**THERMAL PHYSICS AND STATISTICAL MECHANICS**	CO1	**Understand** and analyse the fundamental concepts of heat transfer and discuss its applications in daily life. **(Understand, Analyse)**
		CO2	**Analyse** the quantum mechanical concepts on solving the blackbody spectrum and evaluating solar constant **(Understand, Apply)**
		CO3	**Discuss** basic concepts of thermodynamic systems and working of heat engines. **(Apply)**
		CO4	**Develop** a fundamental understanding of entropy in different processes. (**Analyse**, **Apply**)
		CO5	**Discuss** the concepts of statistical mechanics and describe Maxwell - Boltzmann distribution. **(Understand, Apply)**

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
MM 1341	**ELEMENTARY NUMBER THEORY AND CALCULUS I**	CO1	**Describe** concepts involving divisibility, greatest common divisors, vector valued and multivariable functions. (**Remember**).
		CO2	**Identify** the way in which finding GCD by Euclidean algorithm,

			derivatives and integration of vector valued and multivariate functions. (**Understand**l)
		CO3	**Illustrate** division algorithm, local linear approximations, extrema of multivariate functions, Kepler's laws and related problems. (**Apply**)
		CO4	**Explain** chain rules - various versions, directional derivative, gradient and its applications. (**Apply**)
		CO5	**Analyze** techniques for finding solutions of linear Diophantine Equations by Euler's Method, the geometrical interpretation of curvature and motion of a particles and Lagrange multipliers for extremum problems with constraints (**Analyze**)
ST 1331.1	**STATISTICAL DISTRIBUTIONS**	CO1	**Explain** Discrete distributions - Uniform, binomial, Poisson and geometric, hypergeometric distribution. (**Apply**)
		CO2	**Explain** Uniform, exponential, gamma, Normal distribution. (**Apply**)
		CO3	**Explain** Normal distribution. (**Apply**)
		CO4	**Explain** Chebychev's inequality; Law of large numbers-BLLN , central limit theorem. (**Apply**)
		CO5	**Explain** Sampling distributions - Chi-square(χ 2), t and F distributions. (**Apply**)
PY1331.1	**OPTICS, MAGNETISM AND ELECTRICITY**	CO1	**Discuss** the phenomenon of interference of light, its real world examples and its applications. **(Apply)**
		CO2	**Discuss** the phenomenon of diffraction of light, its real world examples and its applications.**(Apply)**
		CO3	**Study** basics and applications of Polarisation and applications of lasers in communication. **(Apply)**
		CO4	**Understand** the fundamentals of magnetism and analyze problems and formulations from magnetism

			(Understand, Apply)
		CO5	**Explain** and illustrate alternating current and analyze AC circuits **(Apply)**
EN 1311.1	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises. **(Remember)**
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests**. (Evaluate)**
		CO5	**Construct** sentences without errors using remedial grammar. (**Create**)
HN1311.1	**HINDI NATAK, VYAKARAN TATHA ANUVAD**	CO1	**Recall** the main works of the prescribed playwright (**Understand**)
		CO2	**Discuss** about how to translate a passage from english to hindi and vice versa. (**Understand**)
		CO3	**Judge** the parts of speech and importance of translation (**Understand**)
		CO4	**Analyze** the craft and the relevance of the theme of the prescribed drama (**Apply** level)
		CO5	**Identify** the nouns, pronouns, verbs, tenses. (**Analyze** level)
ML 1311.1	**ദൃശ്യകലാസാഹിത്യം**	CO1	സാഹിത്യകൃത്ികള ുംം ദൃശ്യകലകള ുംം ത്മ്മില ുള്ള ബന്ധും മനസിലാക്ക ന്ന
		CO2	കകരളീയ ദൃശ്യകലകൾ നിരീക്ഷിച്ച് സാജാത്യ വൈജാത്യങ്ങൾ കണ്ത്താൻ സാധിക്ക ന്ന
		CO3	സവന്തും കലാൈാസന ഉണര കയ ുംം സവയുംം പരിശീലിച്ച് പ്രകടിപ്പിക്കാൻ കപ്രണയ ൊക കയ ുംം

			ൺെയ്യ ന്ന .
		CO4	എഴ ത്ത്,അഭിനയും,സുംൈെിധാനുംത് ടങ്ങിയ കലാപരമായ ഇടൺപടല കളിൽ സന്നദ്ധത് ഒാക ന്ന .
		CO5	ആസവാദനകശ്ഷി ൈെർദ്ധിക്ക ക യുംം കലാരൂപങ്ങളെ ൈെിമർശ്നാത്മകമായി ൈെിലയിര ത്ത കയ ുംം ൺെയ്യ ന്ന

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
MM 1341–	**ELEMENTARY NUMBER THEORY AND CALCULUS I**	CO1	**Describe** concepts primes, divisibility, integrals and vector valued functions (**Remember**)
		CO2	**Identify** the way of congruence relation, double and triple integrals and vector fields and their graphical representation. (**Understand**)
		CO3	**Illustrate** linear congruences and existence of solutions, area using double integral and polar double integral, divergence and curl. (**Apply**)
		CO4	**Analyze** techniques of Pollard Rho factoring method, Chinese Remainder Theorem, Wilson's theorem, conversion between rectangular to polar integrals, Green's theorem and fundamental theorem of line integrals. (**Analyze**)
		CO5	**Explain** techniques of Pollard p – 1 factoring method, Jacobians in two variables, finding surface area of parametric surfaces, applications of the divergence theorem and Stoke's theorem. (**Apply**)
EN 1411.1	**READINGS IN LITERATURE**	CO1	**Identify** the style and literary devices

			employed in poetry. **(Remember)**
		CO2	**Develop** an appreciation of literary discourse. **(Apply)**
		CO3	**Analyze** literature as a cultural phenomenon.(**Analyze)**
		CO4	**Critique** the works prescribed for study. **(Evaluate)**
		CO5	**Develop** novel interpretations on literary texts using critical thinking. **(Create)**
ML 1411.1	**MALAYALAM, ASHAYAVINIMAYAM, SARGATHMAKARACHANA, BHASHAVABHODAM**	CO1	മലയാള ഭാഷയുടെ പ്രകയോഗരീതികളെക്കുറിച്ച് അറിവുനേടുന്നു (**Understand**)
		CO2	തത്തുല്യമായ രീതിയിൽ ഭാഷ പ്രകയോഗിക്കാൻ കഴിവുനേടുന്നു (**Analyze**)
		CO3	വിവിധതരത്തിലുള്ള രചനകൾ നടത്തി വിലയിരുത്തുന്നു (**Evaluate**)
		CO4	എഴുത്തുകാരുടെ സർഗാത്മകതയെ ഉത്തുംഗമായ രീതിയിൽ വിലയിരുത്തുന്നു (**Evaluate**)
		CO5	മലയാള ഭാഷയുടെ പ്രകയോഗരീതികളെക്കുറിച്ച് അറിവുനേടുന്നു (**Understand**)
HN1411.1	**HINDI KAVITA EVAM EKANKI**	CO1	**Recall** the works of the prescribed poets & one act playwrights. (**Remember**)
		CO2	**Discuss** about the difference between drama and one set play. (**Understand**)
		CO3	**Evaluate** the craft and relevance of subjects in the prescribed one-act plays. (**Analyze**)
		CO4	**Evaluate** the contribution of poets of Bhakthi period & of modern poets. (**Analyze**)
		CO5	**Develop** the creativity of students to prepare a poem. (**Create**)
ST1431.1	**STATISTICAL INFERENCE**	CO1	**Describe** basic concepts of estimation vectors. (**Understand**)

		CO2	**Explain** concepts of Testing of Hypothesis. (**Apply**)
		CO3	**Explain** Large sample tests (**Apply**)
		CO4	**Explain** small sample tests (**Apply**)
		CO5	**Explain** basic concepts of Design of Experiments (**Apply**)
PY1431.1	**MODERN PHYSICS & ELECTRONICS**	CO1	**Discuss** the basic features of atom model - Classical and Quantum mechanical approach **(Understand, Analyse)**
		CO2	**Discuss** the basic properties of nuclei, its radioactivity and its measurement **(Apply)**
		CO3	**Analyze** the fundamentals of Electronics in various electronic components – Diode and Zener diode **(Analyze)**
		CO4	**Explain** and analyse working of bipolar junction transistors and analyze transistor biasing circuits **(Apply)**
		CO5	**Analyze** various number systems, digital codes and their conversion also discuss different types of Gates - Simplifying the network by Boolean expression. **(Apply)**

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
MM 1541	**REAL ANALYSIS I**	CO1	**Describe** the fundamental properties of Real Numbers that corroborate the formal development of Real Analysis. (**Understand**)
		CO2	**Establish** the theory of real sequences and series. (**Apply**)

		CO3	**Examine** the convergence or divergence of different sequences and series. (**Apply**)
		CO4	**Deduce** proofs of various theorems. (**Analyze**)
		CO5	**Analyze** the concepts related to the limit of functions. (**Analyze**)
MM 1542	**COMPLEX ANALYSIS I**	CO1	**Describe** the concept algebra of Complex Numbers, Point Representation of Complex Numbers, Vectors and Polar forms, The Complex Exponential, Powers and Roots, Planar Sets (**Understand**)
		CO2	**Discuss** the limits, continuity and differentiability of complex functions. (**Understanding**)
		CO3	**Examine** analytic functions and other elementary functions. (**Apply**)
		CO4	**Apply** contour integration, Cauchy's integral theorem and Cauchy's integral formula. (**Apply**)
		CO5	**Deduce** proofs of various theorems.(**Analyze**)
MM 1543	**ABSTRACT ALGEBRA**	CO1	**Describe** groups and related definitions. (**Understand**)
		CO2	**Apply** algebraic ways of thinking. (**Apply**)
		CO3	**Examine** abstractly about algebraic structures. (**Apply**)
		CO4	**Analyze** a given structure in detail. (**Analyze**)
		CO5	**Compare** algebraic structures. (**Evaluate**)
MM 1544	**DIFFERENTIAL EQUATION**	CO1	**Define** Direction field, Linear equations, Bernoulli equation, Exact equations, Orthogonal trajectories etc. (Remember & **Understandg**)
		CO2	**Analyze** and solve first order differential equations. (**Apply**)
		CO3	**Analyze** and solve Second order differential equations. (**Apply**)
		CO4	**State** existence and uniqueness of solutions of ODE. (**Remember**)
		CO5	**Apply** various application techniques of ODE. (**Apply**)
MM 1545	**MATHEMATICS SOFTWARE – LATEX & SAGEMATH**	CO1	**Develop** the basics of typesetting an article for a scientific publication. (**Apply**)

		CO2	**Compute** the basics of Vector Calculus, Basic Algebra and Matrix theory using SageMath (**Apply**)
		CO3	**Illustrate** different kind of graph plots using Sagemath (**Analyze**)
		CO4	**Explain** the typeset of mathematical expressions in a LATEX document.(**Apply**)
		CO5	**Test** the basics of making a slide-show presentation using Beamer.(**Evaluate**
MM 1551.3	**BASIC MATHEMATICS**	CO1	**Describe** the various number systems and learn the basic operations on these numbers. (**Understand**)
		CO2	**Apply** the use of ratio and proportion. (**Apply**)
		CO3	**Analyze** the basic statistical tools. (**Analyze**)
		CO4	**Apply** mathematical tools to formulate real life problems and thus solve them. (**Apply**)
		CO5	**Explain** the concepts and use of equations, formulae, mathematical expressions and relationships in a variety of contexts. (**Analyze**)

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME	
MM 1641	**REAL ANALYSIS II**	CO1	**Apply** the concepts of continuity, differentiability and integrability. (**Apply**)
		CO2	**Generalize** the fundamental properties of continuous functions on intervals.(**Understand**)
		CO3	**Explain** the basic theory of derivatives. (**Apply**)
		CO4	**Classify** the theory underlying integration.(**Analyze**)
		CO5	**Test** the continuity and existence of Riemann Integrability **(**Creating Level**)**
MM 1642	**COMPLEX ANALYSIS II**	CO1	**Discuss** the concepts of Sequence and Series of complex functions and Conformal Mapping (**Understand**)
		CO2	**Apply** the concepts of Singular Points, Zeros of complex function, Cross-ratio, Linear Fractional Transformation and Residue Theory (**Apply**)

		CO3	**Analyze** Tayor's Series, Laurent Series and Taylor's theorem (**Analyze)**
		CO4	**Solve** problems using appropriate techniques**.(Apply**)
		CO5	**Establish** results and proofs of various theorems (**Apply**)
MM 1643	**ABSTRACT ALGEBRA – RING THEORY**	CO1	**Define** rings and related definitions. (**Understand**)
		CO2	**Establish** fundamental results and prove them. (**Apply**)
		CO3	**Solve** algebraic problems using appropriate techniques. (**Apply**)
		CO4	**Analyze** algebraic theories and focus insight into abstract algebra. (**Analyze**)
		CO5	**Develop** new structures based on given structures. (**Create**)
MM 1644	**LINEAR ALGEBRA**	CO1	**Describe** elementary concepts in vector space, subspace, linear transformation, eigenvalues and eigenvectors. (**Understand**)
		CO2	**Identify** the bases and dimension of a vector space. (Understand)
		CO3	**Develop** diagonalization of various types of matrices. (**Apply**)
		CO4	**Determine** inverse of a matrix using Gauss elimination method and solve the linear system of equations. (**Apply**)
		CO5	**Explain** the four fundamental subspaces of a vector space and evaluate them. (**Apply**)
MM 1645	**INTEGRAL TRANSFORMS**	CO1	**Categorize** and solve different integral equations using various techniques. (**Analyze**)
		CO2	**Apply** Laplace Transforms and inverse Laplace transforms to various industry related and applied problems. (**Apply**)
		CO3	**Analyze** the properties of certain functions using Fourier series. (**Analyze**)
		CO4	**Solve** differential equations using Laplace transforms method. (**Apply**)
		CO5	**Develop** the concepts of Laplace transformation and Fourier transformation with given boundary conditions which are helpful in all engineering and research work. (**Apply**)
MM 1661.1	**GRAPH THEORY**	CO1	**Discuss** the fundamental concepts of graph theory. (**Understand**)

		CO2	**Apply** the concepts and theorems that are treated in the course for problem-solving and proofs. (**Apply**)
		CO3	**Write** combinatorial proofs, including those using basic graph theory proof techniques such as minimal counterexamples, double counting, and Mathematical induction. (**Apply**)
		CO4	**Identify** various graphic concepts from the given figure. (**Analyze**)
		CO5	**Construct** a graph with the data given. (**Create**)

DEPARTMENT OF STATISTICS

BSC STATISTICS

SEMESTER 1

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1111.1	**LANGUAGE SKILLS**	CO1	**Define** the tenets of soft skills and the four-fold skills. (**Remember**)
		CO2	**Explain** elements of basic communication through micro and macro skills (**Understand**)
		CO3	**Develop** conversational skills through dialogue writings. (**Apply**)
		CO4	**Analyse** the students' ability as a critical reader and writer. (**Analyze**)
		CO5	**Create** expertise in business and professional writing to endorse employability. (**Create**)
EN 1121:	**WRITINGS ON CONTEMPORARY ISSUES**	CO1	**Observe** and discuss the major contemporary issues in the world. (**Understand**)
		CO2	**Identify** the pertinent social issues that might evolve in the future. (**Apply**)
		CO3	**Analyse** the motives and causes of the current social issues. (**Analyze**)

		CO4	**Evaluate** literary texts critically. (**Evaluate**)
		CO5	**Develop** an empathy towards the issue of the society. (**Create**)
HN 1111.1	**HINDI KATHA SAHITYA**	CO1	**Recollect** the main works of the prescribed fiction writers (**Remember**)
		CO2	**Observe** the craft of the fiction writers(**Understand**)
		CO3	**Research** how the resource language is used as a medium in creative writing (**Understand**)
		CO4	**Analyze** the character sketches in the prescribed works (**Analyze**)
		CO5	**Judge** the novel on the basis of subject and relevance among contemporary Hindi novels (**Understand**)
ML 1111.1 -	**MALAYALAM KAVITHA**	CO1	**Describe** the characteristics of early stage Malayalam poetry w.r.t classic translation(**Understand**)
		CO2	**Analyze** the different poetry genres in Malayalam (**Analyze**)
		CO3	**Identify** major poets in Malayalam (**Remember**)
		CO4	**Explain** the historical development of Malayalam poetry (**Understand**)
		CO5	**Prepare** Poetry Review (**Evaluate**)
MM1131.4	**BASIC CALCULUS FOR STATISTICS**	CO1	**Recall** basic concepts, techniques and standard results of differentiation and integration. (**Remember**)
		CO2	**Illustrate** special points of a function, curvature, Roll's theorem and mean value theorem. (**Apply**)
		CO3	**Determine** various types of series, difference method, their convergence and operations with series. (**Apply**)
		CO4	**Explain** infinite and improper integral, plane polar coordinates and integral inequalities. (**Apply**)
		CO5	**Evaluate** area and volume using integration, limit of various series and approximation of error reduction

			formulae. (**Analyze**)
PY1131.3	**MECHANICS AND PROPERTIES OF MATTER**	CO1	**Understand** and apply the dynamics of rigid bodies. **(Understand, Apply)**
		CO2	**Interpret** and analyse the concept and applications of oscillations in the classical field. (**Apply**, **Analyse**).
		CO3	**Apply** the concept of elasticity in explaining the bending of structures. **(Apply)**
		CO4	**Evaluate** the properties of fluids and illustrate their application. **(Apply)**
		CO5	**Understand** the concept and applications of viscosity **(Apply)**
ST 1141	**STATISTICAL METHODS I**	CO1	**Explain** functions, scopes and limitations of Statistics. (**Understand**)
		CO2	**Design** questionnaire for collection of data. (**Create**)
		CO3	**Interpret** data using diagrams and graphs. (**Apply**)
		CO4	**Compute** descriptive statistical measures of a data set. (**Apply**)
		CO5	**Analyze** the nature of frequency distributions in a given data. (**Analyze**)

SEMESTER 2

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1212.1:	**ENGLISH GRAMMAR, USAGE AND WRITING**	CO1	**Identify** grammatical items and sentence structures of English grammar. (**Remember**)
		CO2	**Change** sentences using basic rules of

			English grammar. (**Apply**)
		CO3	**Test** grammatical competence at application level. (**Analyze**)
		CO4	**Find** errors in sentences and correct them (**Evaluate**)
		CO5	**Develop** writing skills for special purposes and academic writing. (**Create**)
EN 1211.1	**ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT**	CO1	**Identify** the wide range of issues in environmental studies (**Remember**)
		CO2	**Interpret** ideas in the prescribed texts to develop an aesthetic approach towards nature. (**Understand**)
		CO3	**Develop** a set of values for environmental protection and conservation (**Apply**)
		CO4	**Devise** solutions to problems that lead to environmental pollution (**Analyze**)
		CO5	**Assess** the function of various governing bodies dedicated to disaster management (**Evaluate**)
HN 1211. 1	**HINDI NIBANDH AURANYA GADYA VIDHAYEM**	CO1	**Recall** the main works of the prescribe writers (**Remember**)
		CO2	**Relate** the contributions of prescribed writers(**Understand**)
		CO3	**Discuss** about the different types of prose. (**Understand**)
		CO4	**Analyse** the craft used in the prescribed prose forms **(Analyze)**
		CO5	**Create** a prose form and try to improve. **(Create)**
ML1211.1	**GADYASAHITHYAM**	CO1	**Describe** the characteristics of renaissance age novels w.r.t prescribed novel (**Understand**)
		CO2	**Analyze** the different novel genres in Malayalam(**Analyze**)
		CO3	**Identify** major short story writers in Malayalam(**Remember**)
		CO4	**Explain** the historical development of Malayalam essays (**Understand**)

		CO5	**Analyze** Social life through the study of personal history (**Analyze**)
ST 1241	**STATISTICAL METHODS II**	CO1	**Apply** statistical tools for prediction-Fitting, Correlation & regression. (**Apply**)
		CO2	**Explain** the skill to analyze data using Excel and R. (**Analyze**, **understand**)
		CO3	**Describe** the functionalities of data mining and the concepts of data-warehousing. (**Remember**, **Understand**)
		CO4	**Explain** the various data mining algorithms and models. (**Understand**, **Analyze**)
		CO5	**Discuss** partial and multiple regressions for three variables, and the concepts of curve fitting.(**Understand**)
MM1231.4	**MATHEMATICS II**	CO1	**Recall** basic concepts of differentiation and integration. (**Remember**).
		CO2	**Explain** theorems of partial differentiation, chain rule, Taylor's theorem for many variable functions and general properties of Jacobians, The Factorial Function, Gamma Function, Recursion Relation and Beta Functions. (**Apply**)
		CO3	**Compute** total differential and total derivative, double and triple integrals, stationary values under constraints and areas and volumes using multiple integrals. (**Apply**)
		CO4	**Illustrate** Gamma Function of Negative Numbers, Some Important Formulas Involving Gamma Functions and Beta Functions in Terms of Gamma Functions. (**Apply**)
		CO5	**Analyze** exact and inexact differentials, stationary values of many variable functions, change of variables in multiple integrals and some special infinite integrals. (**Analyze**)
PY1231.3	**THERMAL PHYSICS**	CO1	**Understand** and analyse the

	AND STATISTICAL MECHANICS		fundamental concepts of heat transfer and discuss its applications in daily life. **(Understand, Analyze)**
		CO2	**Analyse** the quantum mechanical concepts on solving the blackbody spectrum and evaluating solar constant (**Understand**, **Apply**)
		CO3	**Discuss** basic concepts of thermodynamic systems and working of heat engines. **(Apply)**
		CO4	**Develop** a fundamental understanding of entropy in different processes. **(Analyze, Apply)**
		CO5	**Discuss** the concepts of statistical mechanics and describe Maxwell - Boltzmann distribution. **(Understand, Apply)**

SEMESTER 3

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1311.1	**ENGLISH FOR CAREER**	CO1	**Recall** the grammatical and syntactical rules by solving remedial exercises (**Remember**)
		CO2	**Practice** the vocabulary essential for professional communication. **(Apply)**
		CO3	**Analyze** passages for comprehension using logical and critical thinking. **(Analyze)**
		CO4	**Test** vocabulary, grammar, comprehension, and Remedial English from the perspective of career-oriented tests. **(Evaluate)**
			Construct sentences without errors using remedial grammar. **(Create)**
HN1311.1	**HINDI NATAK, VYAKARAN TATHA ANUVAD**	CO1	**Recall** the main works of the prescribed playwright (**Understand**)
		CO2	**Discuss** about how to translate a passage from english to hindi and vice versa. (**Understand**)
		CO3	**Judge** the parts of speech and importance of translation (**Understand**)

			Analyze the craft and the relevance of the theme of the prescribed drama (**Apply** level)
			Identify the nouns, pronouns, verbs, tenses. (**Analyze** level)
ML 1311.1	**ദൃശ്യകലാസാഹിത്യം**	CO1	സാഹിത്യകൃത്ികള ുംം ദൃശ്യകലകള ുംം ത്മ്മില ള്ള ബന്ധും മനസിലാക്ക ന്ന
		CO2	കകരള്ീയ ദൃശ്യകലകൾ നിരീക്ഷിച്ച് സാജാത്യ വൈജാത്യങ്ങൾ കണ്ടെത്താൻ സാധിക്ക ന്ന
		CO3	സവന്തും കലാൈാസന ഉണ ര കയ ുംം സവയ ുംം പരിശ്ീലിച്ച് പകടിപ്പിക്കാൻ കപ്രണയ ൊക കയ ുംം ണ്ടെയ്യ ന്ന
		CO4	എഴ ത്ത്,അഭിനയും,സുംൈിധാനും ത്ടങ്ങിയ കലാപരമായ ഇടണ്ടപടല കള്ിൽ സന്നദ്ധത് ൊക ന്ന .
		CO5	ആസവാദനകശ്ഷി ൈർദ്ധിക്ക കയ ുംം കലാര ൂപങ്ങങ്ങള ൈിമർശ്നാത്മകമായി ൈിലയിര ത്ത കയ ുംം ണ്ടെയ്യ ന്ന
ST:1341	**PROBABILITY AND DISTRIBUTIONS - I**	CO1	**Explain** the basic concepts of probability, and random variables and solve real time problems using Bayes' theorem (**Understand**)
		CO2	**Illustrate** the different aspects of mathematical expectation (**Apply**)
		CO3	**Discuss** about bivariate random variables, its properties and Jacobian transformation. (**Understand**)
		CO4	**Apply** the concepts of correlation coefficient, conditional expectation (regression function), and conditional variance in problem solving(**Apply**)
		CO5	**Identify** the different generating functions. (**Analyze**)
MM1331.4	**FOURIER SERIES, NUMERICAL METHODS AND ODE**	CO1	**Explain** Simple Harmonic Motion, Wave Motion, Periodic Functions and Ordinary

			differential equations. (**Understand**)
		CO2	**Explain** Fourier Series, Average Value of a Function, Fourier Coefficients, Dirichlet Conditions, Complex Form of Fourier Series and Other Intervals. (**Apply**)
		CO3	**Evaluate** fourier series expansion of Even and Odd Functions, Parseval's Theorem, Fourier Transforms, Convergence of iteration schemes and Finite differences. (**Analyze**)
		CO4	**Solve** First order, higher degree first order and higher order differential equations. (**Apply**)
		CO5	**Evaluate** algebraic equations, transcendental equation, simultaneous linear equation, numerical integration and differential equations using various numerical methods. (**Evaluate**)
PY1331.3	**OPTICS, MAGNETISM AND ELECTRICITY**	CO1	**Discuss** the phenomenon of interference of light, its real world examples and its applications. **(Apply)**
		CO2	**Discuss** the phenomenon of diffraction of light, its real world examples and its applications.**(Apply)**
		CO3	**Study** basics and applications of Polarisation and applications of lasers in communication. **(Apply)**
		CO4	**Understand** the fundamentals of magnetism and analyze problems and formulations from magnetism **(Understand, Apply)**
		CO5	**Explain** and illustrate alternating current and analyze AC circuits **(Apply)**

SEMESTER 4

COURSE CODE	COURSE NAME	COURSE OUTCOME	
EN 1411.1	**READINGS IN LITERATURE**	CO1	**Identify** the style and literary devices employed in poetry. (**Remember**)

		CO2	**Critique** the works prescribed for study. (**Evaluate**)
		CO3	**Analyze** literature as a cultural phenomenon. (**Analyze**)
		CO4	**Develop** novel interpretations using critical thinking. (**Create**)
		CO5	**Develop** an appreciation of literary discourse **(Apply)**
HN1411.1	**HINDI KAVITA EVAM EKANKI**	CO1	**Recall** the works of the prescribed poets & one act playwrights. (**Remember**)
		CO2	**Discuss** about the difference between drama and one set play. (**Understand**)
		CO3	**Evaluate** the craft and relevance of subjects in the prescribed one-act plays. (**Analyze**)
		CO4	**Evaluate** the contribution of poets of Bhakthi period & of modern poets. (**Analyze**)
		CO5	**Develop** the creativity of students to prepare a poem. (**Create**)
ML 1411.1	**MALAYALAM, ASAYAVINIMAYAM, SARGATHMAKARACHANA, BHASHAVABHODAM**	CO1	മലയാള ഭാഷയുടെ പ്രകയാഗരീതികളെക്കുറിച്ച് അറിഞ്ഞിരിക്കുന്നു (**Understand**)
		CO2	തെറ്റില്ലാത്ത രീതിയിൽ ഭാഷ പ്രകയാഗിക്കാൻ വേണ്ട പരിശീലനം നടത്തുന്നു (**Analyze**)
		CO3	വിവിധതരത്തിലുള്ള രചനകൾ നടത്തി വിലയിരുത്തുന്നു (**Evaluate**)
		CO4	എഴുത്തകാരുടെ സർഗജീവിതത്തിന്റെ സ്വത്വാത്മകമായി വിലയിരുത്തുന്നു (**Evaluate**)
		CO5	പുതിയ രചനകൾ സൃഷ്ടിക്കുന്നു (**Create**)
ST:1341	**PROBABILITY AND DISTRIBUTION- II**	CO1	**Describe** the univariate discrete distributions- Degenerate, Bernoulli, Binomial, Poisson, Geometric and Hyper geometric. **(Understand)**
		CO2	**Define** multinomial distribution and its properties. **(Remember)**

		CO3	**Describe** the univariate continuous distributions-Uniform, Triangular, Gamma, Beta 2 types, Exponential, Normal, Lognormal and Cauchy. **(Understand)**
		CO4	**Explain** the concepts of multivariate normal distribution. **(Apply, Analyz)**
		CO5	**Derive** the marginal and conditional distribution of bivariate normal distribution. **(Apply)**
MM1431.4	**LINEAR ALGEBRA**	CO1	**Define** Basic properties of Matrices, Vector in 3-space as an ordered triple of real numbers. The n−tuple as a generalization of ordered triple and the space R^n of all n−tuples. Addition of two vectors and multiplication of a vector by a scalar. Algebra of vectors involving addition and scalar multiplication. The norm of a vector. The dot product and orthogonal vectors. Subspace of R^n. (**Remember**)
		CO2	**Discuss** The dot product and orthogonal vectors, geometric interpretation of these concepts algebraic properties of R^n that makes it a vector space, Linear dependence and independence of vectors in R^n, Basis and dimension and the standard basis of R^n, Orthogonal and orthonormal bases, Representation of an arbitrary vector in an orthonormal basis, Rank of a matrix Echelon form and its uniqueness, rank of a matrix by reducing to echelon form. (**Understand**)
		CO3	**Solve** Homogeneous and non-homogeneous system of linear equations and the eigen value problem. (**Apply**)
		CO4	**Explain** Diagonalizable matrices, Quadratic forms in R^n and matrix of quadratic forms, Canonical form of a quadratic form and the principal axes theorem, The Cauchy-Schwarz inequality in R^n and Gram-Schmidt orthogonalisation process (**Analyze**)
		CO5	**Evaluate** Linear transformations from R^n into R^m, Matrix of a linear transformation relative to a given pair of bases, linear

			transformation defined by a matrix, Method of choosing a suitable basis in which the matrix of a given transformation has the particularly simple form of a diagonal matrix. (**Evaluate**)
PY 1431.3	**MODERN PHYSICS & ELECTRONICS**	CO1	**Discuss** the basic features of atom model - Classical and Quantum mechanical approach **(Understand, Analyse)**
		CO2	**Discuss** the basic properties of nuclei, its radioactivity and its measurement **(Apply)**
		CO3	**Analyze** the fundamentals of Electronics in various electronic components – Diode and Zener diode **(Analyze)**
		CO4	**Explain** and analyse working of bipolar junction transistors and analyze transistor biasing circuits **(Apply)**
		CO5	**Analyze** various number systems, digital codes and their conversion also discuss different types of Gates - Simplifying the network by Boolean expression. **(Apply)**

SEMESTER 5

COURSE CODE	COURSE NAME	COURSE OUTCOME	
ST 1541	**LIMIT THEOREMS AND SAMPLING DISTRIBUTIONS**	CO1	**Understand** the convergence of a sequence of events.(**Understand**)
		CO2	**Explain** the laws of large numbers.(**Apply**)
		CO3	**Apply** Chebychev's inequality and central limit theorem.(**Apply**)
		CO4	**Explain** use of tables of $\chi 2$, t and F distributions.(**Apply**)
		CO5	**Explain** probability distributions of 1st and nth order statistic from U (0, θ) and exponential distributions.(**Apply**)
ST 1542	**ESTIMATION**	CO1	**Define** the desirable properties of a good estimator. (**Understand**)
		CO2	**Explain** whether an estimator satisfy any of the desirable properties or not. (**Apply)**.

		CO3	**Construct** confidence intervals for mean, variance, proportion in a population and difference between means and difference between proportions in two populations.(**Apply)**
		CO4	**Describe** Gauss Markov set up. (**Understand**)
		CO5	**Illustrate** the estimability of a linear parametric function.(**Analyze**)
ST 1543	**TESTING OF HYPOTHESIS**	CO1	**Describe** the fundamental concepts of testing of hypotheses.(**Understand**)
		CO2	**State** Neyman-Pearson lemma and apply Neyman Pearson's lemma for mean and variance of a normal population, the Mean of binomial and Poisson distribution. (**Remember**
		CO3	**Define** most powerful test and UMP test (**Remember)**
		CO4	**Explain** likelihood ratio test and its properties.**(Understand**,**Analyze)**
		CO5	**Apply** large sample tests and small sample tests and Describe non-parametric test. **(Understand, Analyze, Apply)**
ST 1544	**SAMPLE SURVEY METHODS**	CO1	**Repeat** the basic concepts of sampling, different types of sampling and errors. **(Remember)**
		CO2	**Distinguish** between SRSWR and SRSWOR then **Evaluate** the population mean, total, variance and confidence interval **(Analyze**)
		CO3	**Assess** the stratified sample and **Explain** the allocation of sample size **(Analyze)**
		CO4	**Distinguish** the systematic sample (linear and circular) and **Compare** the efficiencies of estimates of population mean of systematic sampling **(Understand)**
		CO5	**Estimates** for population mean using Ratio and Regression estimators, and Discuss the bias and variance of ratio estimators **(Evaluate)**

SEMESTER 6

COURSE CODE	COURSE NAME	COURSE OUTCOME

ST 1641	**DESIGN OF EXPERIMENTS AND VITAL STATISTICS**	CO1	**Compute** one-way and two-way analysis of variances. **(Apply)**
		CO2	**Explain** the basic concepts and principles of experimental design.**(Understand)**
		CO3	**Compute** the analysis of CRD, RBD and LSD. **(Apply)**
		CO4	**Compute** the analysis of 22 and 23 factorial experiments.**(Apply)**
		CO5	**Compute** various measures of fertility, mortality and population growth.
ST 1642	**APPLIED STATISTICS**	CO1	**Identify** the various index numbers and compute them for data sets. **(Understand)**
		CO2	**Examine** various tests and the concepts of base shifting, splicing, deflation of index numbers, consumer price index number. **(Apply)**
		CO3	**Explain** the components and models of time series **(Understand)**
		CO4	**Evaluate** and eliminate of trend and seasonal variation **(Analyze)**
		CO5	**Describe** different domains of applied statistics **(Understand)**
ST 1643	**OPERATION RESEARCH & STATISTICAL QUALITY CONTROL**	CO1	**Explain** the evolution and significance of OR **(Understand)**
		CO2	**Describe** the concept of OR (**Remember)**
		CO3	**Solve** LPP using graphical method, simplex method, Big M method and Two-phase method (**Apply)**
		CO4	**Explain** the concept of SQC and mention its application.**(Understand)**
		CO5	**Construct** control chart for variables and attributes and **describe** acceptance sampling plans(**Remember, Create)**
ST 1551.2	**STOCHASTIC PROCESSES**	CO1	**Describe and exemplify** concepts of stochastic processes, time space and state space, classification of stochastic processes based on the nature of time space and state space.(**Remember, Understand)**
		CO2	**Explain** Markov chains: Definition, transition probability matrix, n-step transition Probability and Chapman-Kolmogorov equation(**Understand, Apply)**
		CO3	**Calculate** n-step transition probabilities **(Apply)**

		CO4	**Classify** states of a finite Markov chain. (**Analyze)**
		CO5	**Describe** Branching processes, offspring distribution, extinction probabilities. (**Remember)**