

Course Outcomes

Sl. No	Course code	Course Name	CO Number	Course Outcome
BACHELORS' DEGREE PROGRAMS				
English				
1	ENG 112	Foundation Course	CO1	To gain knowledge of reciting poetry and understanding the structure of a poem.
	Semester I	(SUNBEAMS)	CO2	To understand the strategies involved with reading comprehensions.
			CO3	To acquire knowledge on basics of grammar and apply them to real life contexts.
			CO4	To understand and analyse the given context and exhibiting the basics of writing.
2	ENG 122	Foundation Course	CO1	To understand and apply skimming and scanning techniques while reading.
	Semester II	(SUNBEAMS)	CO2	To understand and interpret a text and finding synonyms and antonyms to master the language.
			CO3	To apply the grammar rules for writing reports and essays.
			CO4	To analyse a sentence and finding the appropriate word that fits well in the context.
3	ENG 232	Foundation Course	CO1	To get knowledge of speed-reading techniques and applying them while reading a text.
	Semester III	(Literary Musings)	CO2	To understand and identify the figure of speech in a poem and analysing the impact on the poem.
			CO3	To analyse language in the context of drama and acquiring conversational skills through dialogues.
			CO4	To understand and analyse the types of sentences and improving writing skills.
4	ENG 242	Foundation Course	CO1	To analyse a text, considering its culture and history, and furthering the reading skills.
	Semester IV	(Literary Musings)	CO2	To get knowledge of identifying the meaning of the words from the context and furthering comprehension skills.
			CO3	To analyse the dialogues and usage of language in dramas and enhancing public speaking skills.
			CO4	To apply the verb structure patterns and punctuation rules to furthering writing skills.
Telugu				
5	LET111	OLD AND MODERN POETRY, SHORT STORIES, & GRAMMER	CO1	Can realize the uniqueness of ancient poetry, the importance of devotion.
	Semester-I		CO2	The uniqueness of modern hymns is that blind beliefs in religions are not observed.
			CO3	Be able to understand the forgotten theater, the living conditions of their lives.
			CO4	Awareness of women's priorities and rights.

6	LET121	OLD AND MODERN POETRY, SHORT STORIES, NOVEL	CO1	Social consciousness is gained through storytelling as part of the modern process. Rayalaseema can know the course of life.
	Semester-I		CO2	Abhyudaya poet Sri Sri can identify the conditions of the country, the modes of progress and the uniqueness of the song.
			CO3	Learn about the social conditions and vices of the 19th century.
			CO4	Analyzing the conditions and problems faced by the farmers in the present times, he learns about the hardships of the farmers.
7	LET131	OLD AND MODERN POETRY, PROSE & GRAMMER	CO1	Contributes to the development of interest in ancient poetry.
	Semester-I		CO2	Understand the damage caused by pride to achieve success.
			CO3	How can a man develop his personality, he can realize the knowledge of becoming a good person himself.
			CO4	Realize the importance of vital rhyme and embellishment to the poem
8	LET141	CLASSICAL DRAMA AND NON- DETAIL	CO1	Poetry is the beginning of a new trend in the literary process. Increases interest in poetry. The history of India is understandable to the people. Cultivate the nature of Telugu poetry and literary taste.
	Semester-I		CO2	Gain an understanding of the contemporary modern process novel. By changing the social relations, the changes in the marital relations, learning new meanings in things like the family system, one is able to recognize the uniqueness of women's freedom and feminine power at an early stage.
			CO3	Can detect the acrobatics and semantics of Telugu words.
			CO4	Man can understand the glory of the tree that underlies survival, the virtue of sacrifice.
Hindi				
9	LHIN - 111	Samanya Hindi-I	CO1	To understand the moral values and life skills taught indirectly the text Premchand's Novel 'Nirmla'
			CO2	To gain the ability to produce appropriate vocabulary and correct words forms
			CO3	To equip oneself with the improved communicative Hindi skills- with practice in writing and speaking.
			CO4	To develop sensitivity towards use of Hindi in the process of communication.
10	LHIN- 121	Samanya Hindi-II	CO1	1. To have knowledge on grammatical aspects and punctuation marks for proper written communication.
			CO2	2. To utilise digital literacy tools to develop grammar skills.
			CO3	3. To develop creative thinking by going through the plays.
			CO4	4. To improve the language skills further- listening, speaking and reading and writing.

11	LHIN-231	Samanya Hindi-III	CO1	1. To develop creative thinking by going through the different prose genres.
			CO2	2. To demonstrate ability to think critically by analysing the prescribed lessons from socio-cultural perspective.
			CO3	3. To develop creative thinking by analysing the prescribed texts and attempting writing general essays in Hindi.
			CO4	4. To have knowledge on National language, official language, Contact language and language of Media.
12	LHIN-241	Samanya Hindi-IV	CO1	1. To develop creative thinking by going through the poetries.
			CO2	2. To demonstrate ability to think critically by analysing the prescribed lessons from socio-cultural perspective.
			CO3	3. To develop creative thinking by analysing the prescribed texts and attempting writing general essays in Hindi.
			CO4	4. To develop interest in Hindi Literature by appreciating the prescribed as well as external works of literature through regular reading.
			CO5	5. To produce appropriate vocabulary and correct word forms to improve spoken and written communication in Hindi.
Political Science				
13	AECC-1	Introduction to Public Administration	CO1	To make students aware about the constitutional values of india and about their rights and duties
			CO2	To understand the federal structure of the country and various state apparatuses functioning within it
			CO3	to teach students about the working of Union Territories administration specially Pondicherry
			CO4	to understand the changing role of administration with advent of new concepts like good governance, grassroots democracy, public private partnership, social audit etc.
Environmental Studies				
14	AECC-2	Environment Studies	CO1	To understand the scope, importance and multidisciplinary nature of Environmental studies.
			CO2	To understand the basic concepts of Environmental Policies, Practices, Environmental Laws and relationship between Human communities and the Environment.
			CO3	To study different kinds of Ecosystems, Renewable and Non-renewable resources, Biodiversity and Conservation aspects.

			CO4	To gain basic knowledge on different kinds of Pollution, Nuclear hazards causes, effects and control measures
Economics 2018-19				
15	ECON 111	Towards Understanding Economics	CO1	Explain what Economics is and explain why it is important
	Semester- 1		CO2	Explain how Economists use economic concepts in policy making
			CO3	To make students understand the demand & supply concepts
			CO4	Students will be able to understand the links between household behavior and the economic models of demand
16	ECON 112	Statistical Methods-I	CO1	Understanding the data and methods of data collection
	Semester- 1		CO2	Understand how to compute average and standard deviation
			CO3	To know the relationship between economic variables
			CO4	Students will be able to understand basic theoretical principles of statistics
17	ECON SO2	Population Studies	CO1	To make the students aware of the importance of population in economic development
	Semester- 1		CO2	Explain various theories that explain the growth of population in a country
			CO3	Enlighten the students on the quantitative and qualitative aspects of population
			CO4	To understand the characteristics of the population through various population techniques
18	ECON 121	Micro Economics-I	CO1	Understand the fundamentals of Micro Economics
	Semester- II		CO2	Get an introduction to supply and the demand and the basic forces that determine equilibrium in a market economy
			CO3	To understand introductory micro economic theory in a local, regional, national & international scenario
			CO4	To understand basic micro economic problems related to the operation of real economy
19	ECON 122	Mathematics for Economists- I	CO1	The aim of the course is to introduce fundamental concept of sequence, series of real numbers and their convergence, continuity, differentiability of real valued functions
	Semester- II		CO2	To learn the basic ideas of abstract algebra and techniques with proof and its use in economics
			CO3	Evaluate determinants and use them to discriminate between invertible and non-

				invertible matrices
			CO4	Use the basic concepts of vector and matrix algebra including lineardependence/independence, basis and dimension of a subspace, rank and nullity for analysis of matrices and systems of linear equations
20	ECON SO3	Environmental Economics	CO1	Understand the interrelationships between environment & economy
	Semester- II		CO2	Students get to know application of microeconomic principles to the environmental problems
			CO3	To understand the environmental resource problems
			CO4	Get exposed to the problem of valuation of environmental resources
21	ECON 231	Micro Economics-II	CO1	To understand basic micro economic problems related to the operation of real economy
	Semester- III		CO2	To understand introductory micro economic theory in a local, regional, national & international scenario
			CO3	It will also help in understanding the efficiency and equity implications of market interference including government policy
			CO4	It will result in understanding the micro and macro theories of distribution, welfare economics, general equilibrium in closed and open system and analysis of economic behavior under uncertainty
22	ECON 232	Macro Economics-I	CO1	To make students aware of the basic theoretical framework underlying the field of macroeconomics
	Semester- III		CO2	It helps students to study the aggregates and to provide overall idea about national economic policies and its implications
			CO3	Students get to know about the determination of equilibrium income
			CO4	Understand the money supply, money demand and interest rate
23	ECON 233	Statistical Methods-II	CO1	To understand the uncertain occurrence situations with logical manner
	Semester- III		CO2	Recognize common probability distributions for discrete and continuous variables
			CO3	To learn variety of probability and non-probability sampling methods for selecting a sample from a population
			CO4	Fostering understanding through real world statistical applications
24	ECON 234	Economics of Insurance	CO1	To understand the concepts and principles of insurance
	Semester-		CO2	To know the various types of insurance and insurance business in India.

	III			
			CO3	to become aware of insurance legislation in India
			CO4	Students will be able to propose regulatory and market solutions that are based on economic theory (as well as practical and legal considerations).
25	ECON 241	Money and Banking	CO1	Students learn about the concepts of money and banking
	Semester- IV		CO2	Get exposed to the theories of demand for and supply of money
			CO3	Learn about functions of central bank and methods of credit control
			CO4	Study about conduct of monetary policy in India monetary policy
26	ECON 242	Macro Economics-II	CO1	Understand various theories of consumption
	Semester- IV		CO2	It enables students to understand determination of equilibrium income and interest rates
			CO3	To derive aggregate demand and supply curves and get expose to wage models
			CO4	Understanding the concept of inflation and Learn about open economy models
27	ECON 243	Mathematics for Economists- II	CO1	To compute and analyse limits, derivatives and integrals functions
	Semester- IV		CO2	To understand the type of variable and usefulness in the development of the function
			CO3	To recognize the appropriate tools for calculus to solve applied problems
			CO4	The student is exposed to economic concepts in mathematical format through simple illustrations & prepares the ground for more scientific study
28	ECON 244	Economics of Insurance- Practice	CO1	Students will be able to describe the economic characteristics of risk mitigation and insurance.
	Semester- IV		CO2	Students will develop an understanding of risk management as well as of agency theory and market failure due to information asymmetry, as well as the economic rationale for regulatory intervention to improve market efficiency.
			CO3	Student will also examine case studies in the insurance market which regulatory failure has arisen
			CO4	Students will be able to propose regulatory and market solutions that are based on economic theory (as well as practical and legal considerations).
29	ECON 351	International Economics-I	CO1	The student will be acquainted with economic concepts and models of international trade

	Semester-V		CO2	Study about the emergence of international trade
			CO3	Understand various international trade theories
30			CO4	Learn about gains from international trade and terms of trade
	ECON 352	Public Finance-I	CO1	Get to know basics of public finance
	Semester-V		CO2	Understand externalities, public goods and merit goods
			CO3	Get exposed to principles of taxation in various theories
			CO4	It will help in understanding analyzing the impact of public policy on the allocation of resources
31	ECON 353	Basic Econometrics	CO1	Apply simple linear regression model to real life examples
	Semester-V		CO2	Understand multiple regression models with applications
			CO3	To learn the development of null & alternative hypothesis & types of errors,
			CO4	To understand the concepts of multicollinearity, autocorrelation and heteroscedasticity
32	ECON 354	Indian Economy-I	CO1	Develop ideas of the basic characteristics of Indian economy, its potential on natural resources
	Semester-V		CO2	Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development
			CO3	It will result in comprehensive understanding of Indian economy
			CO4	Student will be able to understand govt. policies and sectoral programmes
33	ECON 355	Entrepreneurial Development	CO1	The students develop and can systematically apply an entrepreneurial way of thinking that will allow them to identify and create business opportunities that may be commercialized successfully.
	Semester-V		CO2	Have the ability to discern distinct entrepreneurial traits
			CO3	Know the parameters to assess opportunities and constraints for new business ideas
			CO4	Understand the systematic process to select and screen a business idea
34	ECON 356	Gender Studies	CO1	Analyze complex interconnections of gender, race, class, sexuality, ability, and other categories of power and identity in various spheres of human endeavor ranging from the sociopolitical to the aesthetic
	Semester-V		CO2	Demonstrate an openness to learning about people, cultures, and societies different from themselves and their own worlds

			CO3	Situate themselves among various strands of feminist thought and envision themselves as participants in a multidisciplinary dialogue with activists, artists, and academics regarding social, political, and cultural issues of gender and sexuality
			CO4	Apply central concepts and theories from Gender Studies to their own life experiences and the world around them
35	ECON S05	Development Economics	CO1	Understand meaning of economic development and its measurement
	Semester- V		CO2	To explain economic growth theories, international trade development theories and related economic development theories
			CO3	Student will be able to understand the landscape of Indian economic structure
			CO4	To get exposed to Indian social structure and development
36	ECON 361	International Economics-II	CO1	The course is helpful to develop a systematic exposition of models that try to explain composition, direction and consequences of international trade
	Semester- VI		CO2	The student will be acquainted with economic concepts and models of international trade
			CO3	Understand about international trade blocks and their importance
			CO4	Get exposed to economic environment of international trade
37	ECON 362	Public Finance-II	CO1	Get exposed to sources of public revenue
	Semester- VI		CO2	Understand trend and pattern the of public expenditure
			CO3	Get to know about centre and state financial relationships
			CO4	Understand and analyse the distribution of income in the economy
38	ECON 363	Indian Economy-II	CO1	It helps in developing understanding of the students relate to different sectors of Indian Economy
	Semester- VI		CO2	After studying the structural aspects of Indian economy students will be able to understand how planning and infrastructure support can develop an economy
			CO3	To give in depth knowledge of banking and finance to the students
			CO4	Student will be able to understand govt. policies and sectoral programmes
39	ECON 364	History of Economic Thought	CO1	to learn and discuss, at an advanced undergraduate level, how the economic thought has evolved over time
	Semester- VI		CO2	introducing students to the critical comparison of the contributions of the main schools of economics: the classical, the marginalist revolution and its application to the theories of general and partial equilibrium, the current macroeconomic debate between the neo-

				classical and the Keynesian school
			CO3	to understand specific contributions on themes of economic analysis and concerning figures of economists still important in the international economic debate at the international level
			CO4	Through selected readings of their texts and linking the different positions of economic thought to philosophical foundations and political implications.
40	ECON 365	Entrepreneurial Development -Practice	CO1	Develop idea generation, creative and innovative skills
	Semester-VI		CO2	Learn how to start an enterprise and design business plans those are suitable for funding by considering all dimensions of business.
			CO3	Understand entrepreneurial process by way of studying different case studies and find exceptions to the process model of entrepreneurship.
			CO4	Student will also examine case studies in the field of entrepreneurship development
41	ECON S08	Indian Financial Institutions and Markets	CO1	To understand the conceptual framework of financial markets & institutions of India
	Semester-VI		CO2	Students will be able to understand the nature of financial instruments and their usage
			CO3	To give in depth knowledge of banking and finance to the students
			CO4	Students get to know about money and capital market functioning in India
42	ECON S07	Society and Economy	CO1	This course attempts to facilitate the students to relate socio-religious institutions and the economy
	Semester-VI		CO2	To understand how does social institutions determine people access to productive resources
			CO3	Students get to know human society, evolution of culture and how it plays a role in socio economic structures
			CO4	Understand the functions of village, caste, family, kinship in determining access to resources
Commerce				
43	BCGN 111	Financial Accounting	CO 1	Introduction to Accounting Principles, Concepts and Conventions, Accounting Standards issued by ASB.
	Semeste-I		CO 2	Acquire conceptual knowledge of basics of accounting and preparation of financial accounts of Sole Trader.
			CO 3	Familiarize with Self-balancing Ledgers, Rectification of Errors.

			CO 4	Acquire accounting knowledge of Non-Trading Concerns.
			CO 5	Acquires knowledge of books of recording under Hire Purchase & Installment Methods.
			CO 6	Acquires knowledge about the preparation of Partnership Accounts.
44	BCGN 112	Business Law	CO 1	Learn the difference between valid void and voidable contract.
	Semeste-I		CO 2	Memorize difference between contract of guarantee and indemnity
			CO 3	Analyze the rights and duties of Pawnor and Pawnee under contract of bailment..
			CO 4	Learn how to pursue the consumer rights under Consumer Protection Act 1982.
			CO 5	Acquire knowledge about Negotiable Instruments Act 1881.
			CO 6	Acquire knowledge about Sale of Goods Act 1930 – Formation of contract sale and transfer of property in goods.
45	BCGN 121	Business Management	CO 1	To provide conceptual understanding of Management concepts, principles and functions..
	Semester-II		CO 2	Ability to execute managerial tasks of planning, organizing and controlling.
			CO 3	Use effective communication skills to promote respect and relationship.
			CO 4	To familiarize with communication motivation and leadership towards directing
			CO 5	Articulate ideas persuasively and logically and collaborate with others toward a common goal
			CO 6	Understand the nature and dynamics of social behavior relating to organizational performance in order to develop strategies to become effective in organizations.
46	BCGN 122	Company Law	CO 1	Know about the concept of company and shares
	Semester-II		CO 2	Know about the company law in the India
			CO 3	Understand the use of the memorandum of association and article of association in a company, they also learn from this course.
			CO 4	Use of prospectus in a company.
			CO 5	Understand the relationship between company and debenture holders.
47	BCGN 231	Goods and Service Tax	CO 1	Understanding the concept of GST & GST Council
	Semester-III		CO 2	Getting information about the provisions of GST Act – CGST, SGST & IGST Acts

			CO 3	Understanding about the Levy & Collection of Tax, Registration, Tax Invoice and Debt Credit Notes
			CO 4	Awareness of Administration of GST Accounts and Records, Returns, Payment of Tax and Refunds
			CO 5	Understanding about the demand and recovery, Liability to pay Tax, Advance Ruling, Appeals and Revisions, Offences and Penalties
48	BCGN 232	Business Statistics	CO 1	Acquire conceptual knowledge of Statistics as a Subject, Descriptive Statistics, Types of Data, Summation Operation and Rule of Sigma Operations.
	Semester-III		CO 2	Able to independently calculate basic statistical parameters (mean, measures of dispersion, correlation coefficient, indexes)
			CO 3	Able to interpret the meaning of the calculated statistical indicators
			CO 4	Able to choose a statistical method for solving practical problems
			CO 5	Able to explain probability theory and probability distributions in relation to general statistical analysis.
			CO 6	Understand and appreciate the need to solve a variety of business related problems using a systematic approach involving accepted statistical techniques.
49	BCGN 233	Management Accounting – I	CO 1	Acquire conceptual knowledge of Management Accounting, its relationship with Cost Accounting and Financial Accounting and various tools & Techniques of Management Accounting..
	Semester-III		CO 2	Enlighten the students on Financial Statement Analysis with the emphasis on the preparation of Fund Flow and Cash Flow Statements.
			CO 3	To equip the students with the ability to analysis, interpret and use Accounting information in Managerial Decision – making.
			CO 4	Analyze and interpret Financial Statements from the point of view of Management and Outsiders.
			CO 5	To critically analyze and provide recommendations to improve the operations of organizations through the application of Management Accounting Techniques.
			CO 6	Develop the ability to collect, analyze and communicate quantitative and non-quantitative information to assist management in making more effective planning and control decisions.
50	BCGN 234	Communicative Skills	CO 1	To make effective and impressive communication.
	Semester-III		CO 2	To make communication in ethical manner.

			CO 3	Capable to make persuasive digital communication.
			CO 4	Capable to make abstract & summaries of proposals.
			CO 5	Better presentation and communication using proper body language.
51	BCGN 241	Management Accounting – II	CO 1	Apply management Accounting and its objectives in facilitating decision-making.
	Semester-IV		CO 2	Apply and analyze different types of activity-based management tools through the preparation of Estimates.
			CO 3	Analyze Cost- Volume-Profit Techniques to determine optimal Managerial decisions.
			CO 4	Understand Cost Variance Analysis and use of Standard costs in Flexible Budgeting.
			CO 5	Imparts highly relevant skills in areas such as budgeting and decision-making which will enable to identify the most effective profitable opportunities and to contribute significantly to better management within the organization.
52	BCGN 242	Cost Accounting	CO 1	Define the various components of total cost of a product i.e. direct & indirect cost and fixed & flexible cost.
	Semester-IV		CO 2	Determine various levels of material i.e. reorder level, minimum level, maximum level & EOQ for managing working capital.
			CO 3	Use methods of time-keeping & time-booking and manage idle & overtime.
			CO 4	Define the features of overhead or indirect cost of production and basis of allocation and apportionment.
			CO 5	Use cost-sheet to compute unit cost of product.
			CO 6	Determine basis for computing tender price of a product.
53	BCGN 243	Income Tax	CO 1	Provides basic knowledge and equip students with application of principles and provisions of Income Tax Act 1961 and the relevant Rules.
	Semester-IV		CO 2	Acquire conceptual knowledge of Income Tax and the basic terminology and components of Income tax.
			CO 3	Define the procedure of direct tax assessment
			CO 4	Able to file IT return on individual basis.
			CO 5	Able to compute total income and define tax complications and structure.
			CO 6	Able to understand amendments made from time to time in Finance Act.
54	BCGN 244	Arithmetic Skills	CO 1	To enable students to gain understanding of Mathematical Applications to business activities.
	Semester-IV		CO 2	Define basic terms in the areas of business ratios, Proportion and Percentage and calculation of Interest and EMIs.

			CO 3	Solve problems in the areas of business calculus, simple and compound interest account, use of compound interest account, loan and consumer credit.
			CO 4	Acquires conceptual knowledge on Matrices and Determinates and conditions for existence and uniqueness of solution.
			CO 5	Identifies and defines the relationships that exist among the business variables.
			CO 6	Connect acquired knowledge and skills with practical problems in economic practice.
55	BCGN 351	Computer Application Skills	CO 1	Provides an exposure to the use of office automation software and accounting package software in making business decisions.
	Semester- V		CO 2	Work effectively with a range of current, standard, Office Productivity software applications.
			CO 3	Evaluate, select and use office productivity software appropriate to a given situation.
			CO 4	Apply basic adult learning and assessment principles in the design, development, and presentation of material produced by office productivity applications
			CO 5	Demonstrate employability skills and a commitment to professionalism.
			CO 6	Operate a variety of advanced spreadsheet, operating system and word processing functions.
			CO 7	Familiarize the students automation of accounts, Inventory Control, Accounts of Banking and Departmental Accounting through Application of Tally Software
56	BCGN 353	Financial Market Operations	CO 1	To enable the students to understand the operations of financial markets.
	Semester- V		CO 2	To impart knowledge on various financial markets and their services.
			CO 3	To introduce the students about Financial System prevalent in India
			CO 4	To impart knowledge about the structure of development banks in India
			CO 5	To understand the Central Banking Operations, functions of NBFCs, Factoring and Venture capital companies in India.
			CO 6	To enable the students to understand the progress of Government securities markets, Treasury Bill market, Commercial Paper Market and Certificate of Deposits Market in India.
57	BCGN 354	Principles of Marketing	CO 1	Understand the conceptual framework of marketing and process of decision making under various environmental constraints.
	Semester- V		CO 2	Understand the place and contribution of marketing to the business enterprise.
			CO 3	Able to describe the customer segmentation, target marketing and positioning.

			CO 4	Able to understand how a product passes from different stages.
			CO 5	Able to understand the difference between trademark and branding.
			CO 6	Understand different methods of sale promotion.
58	BCGN 356	Corporate Accounting	CO 1	Acquire the basic knowledge of the Corporate Accounting and to learn the techniques of preparing the financial statement.
	Semester- V		CO 2	Acquire the knowledge of companies accounts - Accounts of Holding Company & Banking Companies.
			CO 3	Get the Knowledge of banking system.
			CO 4	Learn about Working format of companies.
			CO 5	Find out how a company can dissolve.
			CO 6	Know the process of liquidation which is included in the company accounts.
59	BCGN 357	Principles of Micro Economics	CO 1	Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of a good produced.
	Semester- V		CO 2	Understand the links between household behavior and the economic models of demand.
			CO 3	Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve.
			CO 4	Understand the links between production costs and the economic models of supply.
			CO 5	Apply the concept of opportunity cost
			CO 6	Analyze operations of markets under varying competitive conditions
60	BCGN 361	Entrepreneurial Skills	CO 1	To orient the learner toward entrepreneurship as a career option and creative thinking and behavior.
	Semester- VI		CO 2	Understand the basic development of entrepreneurship as a profession
			CO 3	Identify and implement systems for collecting and analyzing information to monitor the performance of a new firm
			CO 4	Understand the differences between an entrepreneurial venture and an ongoing business operation
			CO 5	Understand the critical roles of marketing research, competitive analysis, consumer-value proposition, and market-entry strategy in the development of a business plan.
			CO 6	Understand the importance and role of ethical, sustainability, innovation and global issues for strategic decision making.
61	BCGN 362	Bank Management	CO 1	Acquaint the students with the basics of Commercial Bank Management

	Semester- VI		CO 2	Familiar with and able to navigate the various overlapping legal and regulatory regimes applying to banks and bank holding companies
			CO 3	Have Knowledgeable of the root causes of bank panics and wholesale runs and the regulatory framework which has evolved to address this systemic risk.
			CO 4	Demonstrate a comprehension of the principles of banking law and its relationship to banks and customers
			CO 5	Demonstrate an awareness of law and practice in a banking context.
			CO 6	Engage in critical analysis of the practice of banking law from a range of perspectives.
			CO 7	Organize information as it relates to the regulation of banking products and services.
62	BCGN 364	Auditing	CO 1	Impart knowledge about the principles and methods of auditing and their applications.
	Semester- VI		CO 2	Understand the audit process from the engagement planning stage through completion of the audit, as well as the rendering of an audit opinion via the various report options.
			CO 3	Understand auditors' legal liabilities, and be able to apply case law in making a judgment whether auditors might be liable to certain parties
			CO 4	Understand to describe the various levels of persuasiveness of different types of audit evidence and explain the broad principles of audit sampling techniques
			CO 5	Understand to discuss the need for an independent or external audit and describe briefly the development of the role of the assurance provider in modern business society
			CO 6	Understand the quality control procedures necessary to ensure that a competent assurance engagement is performed and apply professional ethics including Code of Conduct to specific scenarios
63	BCGN 366	Human Resource Management	CO 1	Understand the functions, process and task of Human Resource Management
	Semester- VI		CO 2	Acquire knowledge about the importance of human resources management in an organization and the scope of human resource management.
			CO 3	Analysis the importance of different methods of training given to the employees in organization.
			CO 4	Memorize the difference between on the job training and off the job training.
			CO 5	Learn the participant of industrial relation and recruitment of good industrial relation programme.
			CO 6	Understand the concept of industrial relations and meaning of industrial unrest.
64	BCGN 367	Indian Economy	CO 1	Understand the major economic problems in India and their solutions.

	Semester- VI		CO 2	Provide an understanding of modern tools of macro-economic analysis and policy framework.
			CO 3	Understand the causes and consequences of business cycles.
			CO 4	Understand the roles of fiscal and monetary policy in fighting recessions and inflation.
			CO 5	Understand factors that contribute to and detract from long-term economic growth.
			CO 6	Apply economic reasoning to understand the operation of an economy.
Mathematics				
65	MATH111	Theory of Equations and Trigonometry	CO1	Describe the relation between roots and coefficients.
			CO2	Transform the equation through roots multiplied by a given number, increase the roots, decrease the roots, removal of terms
			CO3	Develop the skills to solves problems based on algebra and trigonometry
			CO4	Acquire the knowledge of teams and concepts used in theory of equations and trigonometry
66	MATH112	Differential Calculus	CO1	Select and apply appropriate models and differentiation techniques to solve problems
			CO2	Students will be familiar with the techniques of differentiation of function with real variables
			CO3	Understand the concept of curvature and calculate curvature when the curve is defined in Cartesian form
			CO4	Apply derivative tests in optimization problems appearing in social sciences, physical sciences, life sciences and a host of other disciplines.
67	MATH122	Integral Calculus	CO1	Students will be familiar with the techniques of Integration of function with real variables
			CO2	To develop an understanding of Triple Integral.
			CO3	To understand the Integral Problem formulation and solution method.
			CO4	To describe methods for solving Beta and Gamma Function
68	MATH231	Abstract Algebra	CO1	Relate abstract algebraic constructs to more familiar number sets and operations and see from whether the constructs derive
			CO2	Understand the basic concepts of group actions and their applications
			CO3	Know the fundamental concepts in ring theory such as the concepts of ideals, quotient rings, integral domains, and fields
			CO4	The students will actively participate in the transition of important concepts such homomorphisms & isomorphisms from discrete mathematics to advanced abstract

				mathematics.
69	MATH232	Real Analysis - I	CO1	Acquire the knowledge of role Real number system
			CO2	Understand the real number system and countable concepts in real number system
			CO3	Learn the concept of convergence of sequence and series of Real number system
			CO4	Identify the continuity of a function defined on metric spaces
70	MATH233	Logic and Lattices	CO1	Understand the concepts of Mathematical logic such as Connections, Concepts of Tautology etc..
			CO2	Study the concepts of Relations and Functions
			CO3	Gains knowledge in Formal languages and Automata
			CO4	Classify the concept of Lattices and Boolean Algebra
71	MATH241	Linear Algebra	CO1	Explain the theory behind relations and functions and identify domains and images of functions, based on the structures given
			CO2	Understand the concepts of vector spaces, subspaces, bases, dimension and their properties
			CO3	Relate matrices and linear transformations, compute eigenvalues and eigenvectors of linear transformations
			CO4	Learn properties of inner product spaces and determine orthogonality in inner product spaces
72	MATH242	Real Analysis -II	CO1	Understand several standard concepts of metric spaces and their properties like openness, closedness, completeness, Bolzano-Weierstrass property, compactness, and connectedness
			CO2	Learn the different definitions related to Riemann Integrals
			CO3	Understand the consequences of various mean value theorems for differentiable functions.
			CO4	Improve the skill of problem solving in Real Analysis
73	MATH243	Vector Calculus	CO1	Acquire the knowledge of concepts of the geometric properties surfaces , three dimensional vectors , vector valued functions , planes , lines and the cylindrical and spherical coordinate systems
			CO2	Learn the graph, differentiate, integrate, and solve applied problems involving parametric equations and vector-valued functions.
			CO3	Manipulate vectors to perform geometrical calculations in three dimensions.
			CO4	Realize importance of Green, Gauss and Stokes' theorems in other branches of mathematics.

74	MATH351	Programming Using SciLab- Practical	CO1	The aim of this lab is to introduce you to the software SciLab for numerical computations and in particular familiarizing yourself with the SciLab Desktop, basic commands through the Command window and output through the Graph window.
			CO2	Interpret and visualize simple mathematical functions and operations thereon using plots/display
			CO3	Analyze the program for correctness and determine/estimate/predict the output and verify
			CO4	Evaluate, analyze and plot results
75	MATH352	Complex Analysis - I	CO1	Understand basic complex number system and varieties of operations, analyses and problems
			CO2	Understand the significance of differentiability and analyticity of complex functions leading to the Cauchy Riemann equations.
			CO3	Learn complex differentiation, Planer mappings, analytic and harmonic functions, conformal mapping
			CO4	Improve the skill of problem solving in Complex Analysis
76	MATH354	Ordinary Differential Equations	CO1	Understand the genesis of ordinary differential equations
			CO2	Learn various techniques of getting exact solutions of solvable first order differential equations and linear differential equations of higher order
			CO3	Use the techniques of finding Laplace transforms and inverse Laplace transforms of real functions and their application in solving ordinary differential equations
			CO4	Formulate mathematical models in the form of ordinary differential equations to suggest possible solutions of the day to day problems arising in physical, chemical and biological disciplines
77	MATH356	Mathematical Statistics - I	CO1	Acquire the basic knowledge of probability axioms and rules and the moments of discrete and continuous random variables as well as be familiar with common named discrete and continuous random variables
			CO2	how to derive the probability density function of transformations of random variables and use these techniques to generate data from various distributions
			CO3	Understand the most common discrete and continuous probability distributions and their real life applications
			CO4	how to translate real - world problems into probability models
78	MATH357	Programming using SCILAB	CO1	Develop programs in SCILAB
			CO2	Perform mathematical Modeling in SCILAB

			CO3	To develop programs for 2-D graphics for Contour plots
			CO4	Application in solving ordinary differential equations using Scilab
79	MATH361	Programming Lab in Numerical methods-Practicals	CO1	Implement simple mathematical functions/equations in numerical computing environment such as MATLAB/ SCILAB
			CO2	Develop and implement stable and accurate numerical methods to solve linear systems of equations and find roots of linear and non-linear eqns
			CO3	Perform numerical interpolation, curve fitting, integration, and differentiation
			CO4	Develop and implement stable algorithms to solve ordinary differential equations and simple partial differential equations.
80	MATH362	Complex Analysis -II	CO1	Acquire the knowledge of Complex Integration
			CO2	Learn the role of Cauchy Goursat theorem and Cauchy integral formula in evaluation of contour integrals
			CO3	Understand the convergence, term by term integration and differentiation of a power series
			CO4	Learn Taylor and Laurent series expansions of analytic functions, classify the nature of singularity, poles and residues and application of Cauchy Residue theorem
81	MATH364	Partial Differential Equations	CO1	Acquire the knowledge of PDE
			CO2	Expose different techniques of finding solution of PDE
			CO3	Apply a range of techniques to solve first & second order partial differential equations
			CO4	Model physical phenomena using partial differential equations such as the heat and wave equations
82	MATH366	Mathematical Statistics - II	CO1	Perform correlation, regression analysis and appropriate statistical tests for real life situations
			CO2	Explore small and large data-sets to create testable hypotheses and identify appropriate statistical tests
			CO3	Apply the different sampling methods for designing and selecting a sample from a population.
			CO4	Formulate null and alternative hypotheses and apply small, large sample and non-parametric tests in real life problems
83	MATH367	Numerical Methods	CO1	Obtain numerical solutions of algebraic and transcendental equations
			CO2	Learn about various interpolating and extrapolating methods
			CO3	Solve initial and boundary value problems in differential equations using numerical methods.

			CO4	Apply various numerical methods in real life problems
Computer Science				
84	CSCS113	Introduction to Problem Solving using C	CO1	Demonstrate an understanding of computer programming language concepts.
			CO2	Ability to design and develop Computer programs in C
			CO3	Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures.
			CO4	Able to analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.
85	CSCS114	Digital Logic and Computer Organization	CO1	Identify, understand and apply different number systems and codes.
			CO2	Understand the digital representation of data in a computer system.
			CO3	Learn about Shift registers
			CO4	Understand the general concepts in digital logic design, including logic elements, and their use in combinational and sequential logic circuit design.
86	CSCS116	C Lab	CO1	Skill to write program code in C to solve real world problems and to debug a program
			CO2	In-depth understanding of various concepts of C language.
			CO3	To develop software program using “C” language
			CO4	To learn the concepts of “ C ” Programming
87	CSCS117	Digital Lab	CO1	Learn the basics of gates
			CO2	Construct basic combinational circuits and verify their functionalities
			CO3	Apply the design procedures to design basic combinational circuits
			CO4	To understand the basic digital circuits and to verify their operation
88	CSCS123	PYTHON Programming	CO1	To learn how to design and program Python applications.
			CO2	To understand why Python is a useful scripting language for developers
			CO3	To acquire programming skills in Python.
			CO4	To acquire Object Oriented Skills in Python
89	CSCS124	Data Structures and Algorithms	CO1	To understand concepts about searching and sorting techniques
			CO2	To Understand basic concepts about stacks,queues,lists,trees and graphs
			CO3	To understanding about writing algorithms and step by step approach in solving problems with the help of fundamental data structures

			CO4	Understand basic data structures such as arrays, linked lists, stacks and queues.
90	CSCS128	PYTHON lab	CO1	To learn basic python concept.
			CO2	Ability to isolate and fix common errors in Python programs.
			CO3	Skill to write codes in Python to solve mathematical or real world problems.
			CO4	To develop simple Python programs and code reusing with functions
91	CSCS129	Data Structures & Algorithms lab	CO1	Skill to analyze data and to determine appropriate data structure.
			CO2	Knowledge of various data structures and their implementations.
			CO3	Ability to implement algorithms to perform various operations on data structures.
92	CSCS231	Database Management Systems	CO1	Describe the fundamental elements of relational database management systems
			CO2	database and formulate SQL queries on data
			CO3	Improve the database design by normalization
			CO4	Design ER-models to represent simple database application scenarios
93	CSCS232	Visual Programming using c#	CO1	To understand the various types of applications
			CO2	To get expertise in visual programming
			CO3	To understand the functionalities of middleware platform
94	CSCS233	Computer Networks	CO1	Identify and use various networking components Understand different transmission media and design cables for establishing a network
			CO2	Understand the TCP/IP configuration for Windows and Linux
			CO3	Implement any topology using network devices
			CO4	Implement device sharing on network
95	CSCS234	Software Engineering	CO1	Acquire strong fundamental knowledge in science, software engineering and multidisciplinary engineering to begin in practice as a software engineer.
			CO2	Design applicable solutions in one or more application domains using software engineering approaches that integrate ethical, social, legal and economic concerns.
			CO3	Apply new software models, techniques and technologies to bring out innovative and novelistic solutions for the growth of the society.
			CO4	Deliver quality software products by possessing the leadership skills as an individual or contributing to the team development
96	CSCS237	Visual Programming & RDBMS Lab	CO1	understand the programming algorithm, process, and developing data base designs
			CO2	Understand the use of Structured Query Language (SQL) and learn SQL syntax.

			CO3	Apply normalization techniques to normalize the database
97	CSCS238	Computer Networks Lab	CO1	To educate the functions of various OSI layers in detail
			CO2	Knowledge of OSI Layers in Computer Network.
			CO3	Ability to identify transmission media, types and topologies of network.
			CO4	Familiarization with the techniques of error detection and congestion control
98	CSCS242	Object Oriented Programming using Java	CO1	Discuss the principles of inheritance, interface and packages and demonstrate through problem analysis assignments
			CO2	To learn experience of designing, implementing, testing, and debugging graphical user interfaces in Java using applet and AWT that respond to different user events
			CO3	To understand importance of Multi-threading & different exception handling mechanisms.
			CO4	To understand the importance of Classes & objects along with constructors, Arrays and Vectors.
99	CSCS241	Operating Systems	CO1	Understand the basics of operating systems like kernel, shell, types and views of operating
			CO2	Describe the various CPU scheduling algorithms and remove deadlocks.
			CO3	Explain various memory management techniques and concept of thrashing
			CO4	Recognize file system interface, protection and security mechanisms
100	CSCS243	Client/Server Computing	CO1	1. Understand the concept of client-server development and learn problem solving skills through design scenarios for network environment.
			CO2	2. To Define the underlying concepts in client server development using common access databases
			CO3	3. To understand Distributed computing environment, RMI and DCOM architecture,& CORBA.
			CO4	4. The objective of the course is to understand various WAN technologies and related Protocols
101	CSCS247	Principles of Programming languages	CO1	To introduce notations to describe syntax and semantics of programming languages
			CO2	To introduce the concepts of ADT and object oriented programming for large scale software development.
			CO3	To analyze and explain behavior of simple programs in imperative languages using concepts
			CO4	To introduce the concepts of concurrency control and exception handling.
102	CSCS249	Computer Graphics		Gain knowledge about graphics hardware devices and software used.

				Understand the two dimensional graphics and their transformations
				Understand the three dimensional graphics and their transformations
				Be familiar with understand clipping technique
103	CSCS237	Object Oriented Programming Lab	CO1	To learn the basic concepts of OOP
			CO2	Ability to create packages and interfaces.
			CO3	Ability to implement error handling techniques using exception handling.
			CO4	Skill to write Java application programs using OOP principles and proper program structuring.
104	CSCS301	Programming with C++	CO1	To learn the basics of C++ programming languages.
			CO2	To learn concepts of object oriented programming in developing solutions to problems demonstrating usage of data abstraction, encapsulation, and inheritance
			CO3	To implement the program using the concepts Polymorphism, dynamic binding.
			CO4	Understand and Apply object oriented programming concepts in problem solving through C++.
105	CSCS351	Web Technology	CO1	Apply the concepts, principles and methods of Web engineering
			CO2	have a sufficient theoretical knowledge and analytical skills to develop Web applications;
			CO3	Apply the described concepts, principles and methods to development of complex Web applications
			CO4	Design and develop website using current Web technologies
106	CSCS353	Data Mining	CO1	To develop programs and methods for data Mining applications.
			CO2	To solve problems for multi0core or distributed, concurrent/Parallel environment
			CO3	1. To understand the Data Mining and their techniques to solve the real time problems.
			CO4	To develop ability to design various algorithms based on data mining tools
10	CSCS356	Systems Software	CO1	Distinguish between Operating Systems software and Application Systems software
			CO2	Identify Desktop and Windows features
			CO3	Describe the “boot” process.
			CO4	Use Utility programs.
108	CSCS357	Artificial Intelligence	CO1	To study the concepts of Artificial Intelligence and Methods of solving problems using

				Artificial Intelligence
			CO2	To understand the basic techniques of knowledge representation and their use and components of an intelligent agent
			CO3	To be able to implement basic decision making algorithms, including search based and problem solving techniques, and first-order logic.
			CO4	To know the basic issues in machine learning
109	CSCS259	Web Technology Lab	CO1	To inculcate knowledge of web technological concepts and functioning of internet
			CO2	To learn and program features of web programming languages.
			CO3	To understand the major components of internet and associated protocols.
			CO4	To design an innovative application for web.
110	CSCS402	PROLOG Programming		To learn how to create programs based on artificial intelligence
				write PROLOG programs to solve a variety of problems
				develop and test Prolog programs using a suitable Prolog interpreter
				use PROLOG as an effective AI programming tool
111	CSCS361	Microprocessors and Controllers	CO1	Understand the taxonomy of microprocessors and knowledge of contemporary microprocessors
			CO2	To understand the architectures and the instruction set of 8086 microprocessor
			CO3	To understand the architectures and the instruction set of 8051 microcontroller
			CO4	To learn interfacing of microprocessors and microcontrollers with various devices
112	CSCS362	PROJECT	CO1	An ability to use current techniques, skills, and tools necessary for computing practice.
			CO2	An ability to use current techniques, skills, and tools necessary for computing practice.
			CO3	An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
Zoology				
113	UZOC 111	BIODIVERSITY OF INVERTEBRATES	CO	1. To understand Biodiversity, Habitat, Adaptation organization and taxonomic status of invertebrates. 2. Explaining the basic aspects of classification, structural and functional details of Invertebrates.
114	UZOP 114	Practical - 1 : BIODIVERSITY OF INVERTEBRATES	CO	To understand Biodiversity, Habitat, Adaptation through practical

115	UZOC 121	BIO DIVERSITY OF CHORDATES AND VERTEBRATES	CO	To discuss habitat, adaptations and organization of chordates.
116	UZOP 124	Practical : BIO DIVERSITY OF CHORDATES AND VERTEBRATES	CO	To understand habitat, adaptations and organization of chordates through practical
117	UZOC 231	ANIMAL PHYSIOLOGY	CO	To understand various aspects of physiological activities of animals with special reference to mammals.
118	UZOP 234	Practical Animal Physiology	CO	To understand various aspects of physiological activities of animals
119	UZOS 233	VERMITECHNOLOGY	CO	To impart training on Earthworm culture technology To create knowledge on Self - Employment opportunity
120	UZOC 241	DEVELOPMENTAL BIOLOGY	CO	To understand ontogenesis, the development of animals including parthenogenesis and to study embryonic adaptations, human reproduction and reproductive technology in man.
121	UZOP 244	Practical DEVELOPMENTAL BIOLOGY	CO	To understand the development of animals, human reproduction and reproductive technology in man.
122	UZOS 243	CLINICAL LABORATORY TECHNOLOGY	CO	To impart awareness on Clinical Lab Technology To create knowledge on Self-Employment Opportunity
123	UZOS 351	APICULTURE	CO	Entrepreneur motivation for practicing apiculture as cottage industry.
124	UZOE 352	IMMUNOLOGY	CO	To study the process which help to maintain the organisms internal environment, when challenged with foreign substances. To understand the advances in Immunology
125	UZOP 358	Practical : IMMUNOLOGY	CO	Immune organs and their function
126	UZOE 354	CELL AND MOLECULAR BIOLOGY	CO	To learn the structure and functions of various cellular components. To understand the molecular basis of cell structure DNA structure and functions.
127	UZOP 358	Practical -CELL AND MOLECULAR BIOLOGY	CO	To learn the structure and functions of various cellular components and understand the molecular basis of cell structure ,DNA structure and functions.
128	UZOE 355	BIOCHEMISTRY AND INTERMEDIARY METABOLISM	CO	To define and explain the basic principles of biochemistry and metabolic pathway
129	UZOP 358	Practical -BIOCHEMISTRY AND INTERMEDIARY METABOLISM	CO	To understand the basic principles of biochemistry and metabolic pathways

130	UZOS 361	AQUATIC BIOLOGY AND CULTURE TECHNIQUES	CO	To study and understand the biology of fishes and make the students to know about the culture techniques of fish.
131	UZOG 357	PUBLIC HEALTH AND HYGIENE	CO	To impart awareness on public health and Hygiene To create knowledge on Health Education.
132	UZOE 362	ENDOCRINOLOGY AND REPRODUCTIVE BIOLOGY	CO	Explaining the role of hormones on physiological activities of animals with special reference to humans.
133	UZOP 368	Practical ENDOCRINOLOGY AND REPRODUCTIVE BIOLOGY	CO	To understand Endocrine glands structure and functions
134	UZOE 364	EVOLUTION AND CONSERVATION BIOLOGY	CO	To explain the scientific concepts of animal evolution through theories and evidences.
135	UZOP 368	Practical : EVOLUTION AND CONSERVATION BIOLOGY	CO	To Understand concepts of animal evolution
136	UZOE 365	GENETICS AND BIOTECHNOLOGY	CO	To know the principles of genetics and to integrate biology with technology
Physics				
137	PHYS-111	Mechanics of particles, rigid bodies and continuous media	CO1	To Understand the Laws of Motion.
			CO2	To Understand the Basics of Vector Calculus
			CO3	Understand the Laws of Gravitation, GPS
			CO4	To Understand the Rigid Body Dynamics
			CO5	To Understand and determination Elasticity, Viscosity and Surface Tension Properties and their Applications
138	PHYS-112	Kinetic theory and thermodynamics	CO1	To Understand the Laws of Thermodynamics and their applications.
			CO2	To Understand the different Thermodynamic Potential and application of Specific heat of gases
			CO3	To Understand the Black Body Radiation and derivation of different Laws of Radiation
			CO4	Introduction to Statistical Mechanics
139	PHYS – 121	Oscillations waves and acoustics	CO1	To Understand the Superposition Principle of Harmonic Oscillations analytically and Graphically and understand the Beat Phenomenon

			CO2	To Understand Wave Motion and Applications
			CO3	To Understand the Sound Phenomenon and dependence of its on Pressure and Temperature
			CO4	To Understand Acoustics and its applications
140	PHYS – 122	Optics	CO1	To Understand Fermat’s Principals and Matrix Method of representation in Paraxial Optics
			CO2	To study Reflection and Refraction Phenomenon in Optics and different Aberrations present in lenses
			CO3	To study Interference and Diffraction of Light and their Applications
			CO4	To Understand Polarization of Light, its production and applications
141	PHYS – 231	Electricity and Magnetism	CO1	To Study Vector Analsis and introduction to Gauss-divergence and Stoke’s Theorem
			CO2	To Understand Electric Force, Electric Field and Electric Potential in different configurations
			CO3	To Understand the basics laws of Magnetism and calculations of magnetic field of a Straight, Cirular Coil carry current .
			CO4	To Study Maxwell’s Equation and Electromagnetic Wave Propagation.
142	PHYS – 232	Modern Physics and Relativity	CO1	To Understand the various problems where Classical Physics fails to explain which leads to Modern Physics
			CO2	To Understand Plank’s Quantum Principle, Photon, Photo Electric effect and its applications
			CO3	To Understand Schrodinger equation and introduction to Quantum mechanical operators, Physics interpretation of wave equation , Probabilities
			CO4	To Understand Special Theory of Relativity and its Postulates. Length Contraction etc.
145	PHYS – 241	Quantum Mechanics	CO1	Understand the Time Dependent Schrodinger Equation and its Applications and evaluation of Quantum mechanical Operators
			CO2	Understand the Time Independent Schrodinger Equation and its Applications and evaluation of Quantum mechanical Operators
			CO3	Discussion of bound States in an arbitrary potentials
			CO4	Understand the Quantum Theory of Hydrogen and like atoms.
146	PHYS – 242	Electronics	CO1	Understanding of Network Theorems, LR,CR, LCR Circuits
			CO2	Study of different Diodes , biasing of Diodes and Applications
			CO3	Study of different Transistor, Biasing and Applications

			CO4	Understand the Quantum Theory of Hydrogen and like atoms.
147	PHYS – 242	Electronics	CO1	Understanding of Network Theorems, LR,CR, LCR Circuits
			CO2	Study of different Diodes , biasing of Diodes and Applications
			CO3	Study of different Transistor, Biasing and Applications
			CO4	Study of different FET , JFET, MOSFET and applications
			CO5	Study of different Operational Amplifiers , its properties and its applications
148	PHYS – 352	Solid States Physics	CO1	Understanding of Crystallography, lattice parameters, X-Ray Diffraction of Crystals
			CO2	Study of types of bonding in solids, lattice vibrations-Optic and acoustic mode
			CO3	Study of different conduction mechanism in solids
			CO4	Study of different magnetic properties and applications in Solid State Physics
			CO5	Study of Superconductors , Meisesner Effect and Type-I and Type-II Super Conductors.
149	PHYS – 353	Atomic and Molecular Spectroscopy	CO1	Understanding of Atomic Specyra, Coupling of Orbiatls, X- Ray Spectra, Moseley’s law
			CO2	Study of the Effect of Magnetic Field on energy levels: Zeeman effect
			CO3	Understanding of Rotational and Vibrational levels and their applicaitons
			CO4	Study of Raman Effect and its Applications
			CO5	Understanding of Laser Systems and their applications
150	PHYS – 2354	Digital Electronics	CO1	Understanding of Binary Numbers System an different logic gates, Karnaugh map, Combinational logic gates
			CO2	Understanding working principle of Flipflpts-RS Filpflop, JK Filpflop, JK-Master slave Filpflop,
			CO3	Understanding working principle of Multiplexrs, Counters, A/D and D/A Converters
			CO4	Study of Pin Configuration, Addressing modes, Instruction set of Microprocessors
			CO5	Study of Components of Microprocessors , Programming of Microprocessors.
151	PHYS – 362	Numerical Methods and Computational Physics	CO1	Understanding of Binary Numbers System an different logic gates, Karnaugh map, Combinational logic gates
			CO2	Understanding working principle of Flipflpts-RS Filpflop, JK Filpflop, JK-Master slave Filpflop,
			CO3	Understanding working principle of Multiplexrs, Counters, A/D and D/A Converters
			CO4	Study of Pin Configuration, Addressing modes, Instruction set of Microprocessors
			CO5	Study of Components of Microprocessors , Programming of Microprocessors.
152	PHYS –	Numerical Methods and	CO1	Understanding the properties of Nucleus – Size, mass, Charge Density, Binding Energy

	363	Computational Physics		
			CO2	Understanding different Nuclear Model, Magic Numbers and Concept of Nuclear Force.
			CO3	Understanding Radioactivity Decay, Nuclear Reactions, Conservation Laws
			CO4	Understanding the basics of Particle Physics and Different Quantum Numbers conservation rules
153	PHYS – 364	Renewable Energy and Energy harvesting	CO1	Understanding the importance of Alternative Sources of Energy – Fossil fuels and Nuclear Energy etc
			CO2	Study of Solar Energy and its importance
			CO3	Importance of Geothermal Energy and Hydropower Resources
			CO4	Importance of Electromagnetic Harvesting and Recent Applications – Environmental Issues
154	PHYS – 355	Astrophysics	CO1	Understanding Radiointerferometry – Characteristics and Properties. Working of Hubble Space Telescope
			CO2	Study of Astronomical Objects, Chandrasekhar limit, Schwarzschild Radius, Tidal and Planetary Theories
			CO3	Study of Solar System, Big bang Theory
			CO4	Application of Astrophysics, Rocket equations and Theory of Geosynchronous Satellite.
155	PHYS – 365	Communication Electronics	CO1	Understanding Amplitude and Frequency Modulation
			CO2	Study of Image Transmission principle, Working of TV
			CO3	Study of Wave Propagation in Space
			CO4	Application of Communication Electronics
Botany Allied				
156	UBOT 111	Thallophytes, Microbes and Plant Pathology	CO1	To understand the ecology, distribution, thallus organisation, classification, reproduction and life cycles of different algal and fungal species.
			CO2	To explore the economic importance of algae and fungi.
			CO3	To study the symbiotic associations, types, significance of Lichens and Mycorrhiza
			CO4	To understand the morphology, classification, structure and reproduction of Bacteria and Viruses
			CO5	To study the various diseases caused by microorganisms, their symptoms, disease cycle and control measures.
157	UBOT 112	Botany Supportive Paper I (Allied Botany)	CO1	To gain the basic knowledge, salient features and economic importance of Bacteria, Cyanobacteria, Algae, Fungi and Archegoniatae.

			CO2	To understand the structure, reproduction and life cycles of important species of cryptogams (non-flowering plants) and Gymnosperms.
			CO3	To study the basics of Angiosperms, Vegetative and Floral characters some families
			CO4	To study the economically important plants and their uses in daily life.
			CO5	Learn about the various angiospermic plants
Chemistry				
158		General Chemistry-I	CO – 1 :	Understand the basics of Atomic Structure, Trends in the periodic table, derivation of Schrodinger wave equation.
			CO – 2	Understand the basics of Chemical bonding, Molecular Orbital theory & Valance bond theory, hybridization and discussion on structures of molecules
			CO – 3	Study about the basics of Nomenclature , Hybridisation and Electron displacement effects, aromaticity. To study about the types of reagents ,Organic reactive intermediates and types of Organic reactions.
			CO – 4	Understands the basics of Stereochemistry ,RS Configurations, E & Z configurations, Enantiomers, diastereomers, Conformations of ethane and butane and cyclohexane.
			CO – 5	Have a detailed study on the Kinetic Theory of gases - laws –Derivation of Kinetic gas equation – Vanderwaals equation- critical constants. Have thorough understanding on the basics of Maxwells distribution of molecular velocities –RMSV, AV,MPV and Collision diameter , Collision frequency, Mean free path & liquefaction of gases.
159		General Chemistry Practical - I (Volumetric Analysis & Chromatography)	CO – 1 :	Practical training in doing Volumetric Analysis, which includes Acidimetry, Alkalimetry, Permanganometry, Dichrometry, Iodometry and Complexometric titrations involving EDTA Titrations.
			CO – 2	Paper Chromatographic separation and finding of Rf Values of Amino acids
			CO – 3	Identification and Separation of Sugars by Paper Chromatography.
160		General Chemistry-II	CO – 1	Study Chemical Energetics, Review of Thermodynamics and the Laws of Thermodynamics, Principles of Thermochemistry, Calculation of Bond Energy and Kirchhoff's Equation, Third Law of Thermodynamics, Concepts of Entropy and Evaluation of absolute Entropy.
			CO – 2	To study Concepts of Chemical equilibrium, Lechatliers Principle... variation of equilibrium constant with temperature. Strong and weak Electrolytes, Degree of Ionization, Ionization of weak acids and Bases, Salt hydrolysis, pH Scale, Common Ion effect, Buffer solutions and Solubility Product and its Applications

			CO – 3	Study the Hydrogen, Hydrides and S-Block Elements: Hydrogen Isotopes, Hydrides-Types and Hydrogen Bonding. Study of Alkali Metals and Alkaline Earth Metals - Halides, Oxides, Hydroxides, Organometallics Compounds.
			CO – 4	Study the preparations , properties of Alkanes and Cycloalkanes and mechanism of Halogenations of methane., Baeyers strain theory. Study the preparation . properties and main reactions and mechanisms of alkenes and alkynes.
			CO – 5	To study the Benzene Chemistry, its preparations , properties, Mechanisms of Electrophilic substitution reactions, orientation in electrophilic substitution.
161		General Chemistry Practical - II (Physical Chemistry Practicals)	CO – 1	Experiments in Physical Chemistry, which includes
			CO – 2	Determination of Rate Constants of ester hydrolysis, Kinetics of Persulphate oxidation, Determination of Distribution Constants, Determination of CST of phenol- Water system, Determination of Transition Temperatures and Construction of Phase Diagrams.
162		Physical Chemistry - I	CO – 1	Study the Solid state - Laws of Crystallography and X-ray diffraction studies- Derivation of Bragg's Equation, Determination of structures of NaCl, CsCl and KCl.
			CO – 2	To Study Chemical Kinetics, Derivation of Rate Constants, Half Life period, Pseudo order reactions, Determination of Order of Reactions, Activation Energy and Theory of Reactions.
			CO – 3	To Study Catalysis , Adsorption and Photochemistry- Derivation of Michaelis-Menten Constant, Theories of Catalysis. Theories of Adsorption - Laws of Photochemistry, Jablonski Diagram- Fluorescence and Phosphorescence- Quantum Yield.
			CO – 4	Study of Dilute Solutions and Colligative Properties- Raoult's Law, Molecular weight determinations, Laws of Osmotic Pressure, Elevation of Boiling Point and Depression of Freezing point. Thermodynamic derivations.
			CO – 5	Study of Phase Equilibrium, Derivation of Gibb's Phase rule, Phase equilibria of One Component and Two Component Systems, Raoult's and Henry's Law, Lower and Upper consolute temperature, Azeotropes, Nernst distribution Law-Thermodynamic derivations.
163		Inorganic Chemistry - I	CO – 1	To Study Nuclear Chemistry- Packing fraction, mass defect, binding Energy of Nucleus, Nuclear Models, Nuclear Fission and Fusion Reactions, Radioactivity- half life period , Group displacement Law, radioactive decay series, Isotopes-separation and Applications

			CO – 2	Principles of Qualitative Inorganic Analysis-Principles of Solubility and Solubility Product.Separation of metal ions-Sulphide separations. Application Solubility product principle in Qualitative and Quantitative Analysis. Spot Tests, Separation and Purification of mixtures.
			CO – 3	Study of Acids and Bases and Non aqueous Solvents- Acid Base Theories, Hard & Soft Acids and Bases (HSAB), Acid Base Strength & Hardness and Softness.
			CO – 4	To Study the P-Block Elements- Boron, Carbon and Nitrogen Groups
			CO – 5	To Study the Oxygen-Sulphur family, Halogens and Noble gases.
164		Basic Analytical Chemistry	CO – 1	Laboratory Glassware- Types and Care, Principles of Stoichiometry- Mole and Equivalent Concepts, Concentration Systems. Calculations involving various types of Concentration systems.
			CO – 2	Principles of Titrimetric Analysis-Primary Standard and Secondary Standard Solutions. Acid-Base Titrations, Redox Titrations, Complex formation Titrations and Precipitation Titrations.
			CO – 3	Statistical Evaluation of Analytical Data-Ways of Expressing Accuracy and Precision of Data. Types of Errors- Methods of reporting data.Significant figures. Statistical treatment of indeterminate errors- confidence limits Q-Test and Linear Regression of Data.
165		Physical and Inorganic Chemistry Practical	CO – 1	Physical Chemistry Practicals-
			CO – 2	Determination of Surface Tension, Determination of Viscosity and Determination of Melting Points
			CO – 3	Inorganic Chemistry Practicals-
			CO – 4	Semimicro Inorganic Analysis of a Mixture containing Two Cations and Two Anions of which one Anion being an interfering radical.
166		Physical Chemistry - II	CO – 1	To Study Electrochemistry - Specific Conductance and Equivalent conductance - measurement, Kohlrausch law, Debye-Huckle-Onsager equation, Transport number-Hittorf method, Determination of Ka of Acids. Determination of Ksp.
			CO – 2	Types of Reversible Electrodes- Nernst Equation, Derivation of Cell EMF and Single Electrode Potential.Electrochemical Cells. Determination of pH and Potentiometric Titrations. Buffers- Hendersen-Hazel equation. And Hydrolysis of Salts.
			CO – 3	Elementary Quantum Mechanics-Black Body Radiation, Photoelectric effect, Compton effect,Heisenberg's uncertainty Principle, Schrodinger wave equation, Pastulates of Quantum mechanics, particle in one dimensional Box.
			CO – 4	Molecular Spectroscopy-Microwave spectroscopy and Infrared spectroscopy

			CO – 5	Raman Spectroscopy, Electronic spectroscopy and Optical activity and Polarization, Dipolemoment studies and refractivity methods, Magnetic properties.
167		Organic Chemistry - I	CO – 1	To Study Alkyl halides and Aryl halides-Preparation, Properties.
			CO – 2	To Study Alcohols and Phenols-Preparation Properties.
			CO – 3	To Study Carbonyl Compounds-Aldehydes and Ketones, Carboxylic acids and their derivatives, synthetic applications of Diethyl malonate and Acetoacetic ester.
			CO – 4	To Study Organic Nitrogen Compounds- Nitro Compounds, Aliphatic and Aromatic Amines, Diazonium salts.
			CO – 5	To Study Heterocyclic Compounds- Five and Six membered Heterocyclic compounds.
168		Analytical and Clinical Biochemistry	CO – 1	Biological Chemistry-Elementary Treatment of Digestion and absorption of Carbohydrates, Proteins and Fats
			CO – 2	Enzymes and Hormones- Elementary Treatment. Micronutrients and their Biological role in Human Systems.
			CO – 3	Biochemical Analysis of Blood and Urine.
169		Physical and Organic Chemistry Practical	CO – 1	Experiments in Physical Chemistry, which includes
			CO – 2	Determination of Rate Constants of ester hydrolysis, Kinetics of Persulphate oxidation, Determination of Distribution Constants, Determination of pH using Quine hydrone electrode, Determination of Chromate using Spectrophotometry.
			CO – 3	Separation of Organic Mixtures
			CO – 1	To study in detail about the Principles of Metallurgy and extraction of Some important metals.
			CO – 2	To study in detail about the Chemistry of Lanthanides and Actinides Main focus is on the variable oxidation states, magnetic properties and extraction of some lanthanides & actinides elements.
			CO – 3	To study in detail about the fundamentals of Co ordination Chemistry – Nomenclature – Werner’s theory – valence bond theory. EAN
			CO – 4	To study about the pearsons HSAB concept – Chemistry of halogens and Interhalogen Compounds
			CO – 5	To study in detail about the theory Bonding in metals - Valence bond theory and Crystal defects – Schottky and Frenkel Defects.
170		Organic Chemistry – III	CO – 1	Detailed study on the Chemistry of Five membered and Six membered Heterocycles – Synthesis , properties and their Mechanisms.

			CO – 2	Study on the Chemistry of Carbohydrates – Monosacharides – determination of structure and their chemical properties of Glucose and fructose and brief introduction to disachharides and poly sachharides.
			CO – 3	To study the chemistry of Polymers – Addition and Condensation polymerisation and preparation of different polymers.
			CO – 4	Detailed study on the preparation properties of amino acids - peptides and proteins – structure of RNA and DNA.
			CO – 5	A brief introductory study on fats oils and detergents and synthesis of some important dyes.
171		Physical Chemistry – III	CO – 1	Detailed study on Phase equilibrium – one component and two component systems – Nernst Distribution law
			CO – 2	To study in detail about the Chemistry of Chemical Kinetics – Order, molecularity of reactions – First order and second order reactions – collision theory and Arrhenius Equation – Chemistry of Catalysis and Michaelis and Menten equation.
			CO – 3	To study the chemistry of Adsorption – Langmuir Adsorption Isotherm - Basic Principles of PhotoChemistry.
			CO – 4	Study on basics of computers.
172		Environmental Chemistry – III	CO – 1	Basic terminology and Introduction .
			CO – 2	Chemistry of Airpollutants and their effects and experimental determination of some important Air pollutants by using High volume Air sampler and Spectrophotometer.
			CO – 3	Study of the Chemistry of some important air pollutants and their effects.
			CO – 4	Elementary study on Radioactive and Noise Pollution.
173		Practical - V (Gravimetric Analysis & Inorganic Preparation)	CO – 1	Training in doing Gravimetric Analysis of Barium, Lead, Copper, Nickel, Magnesium and Chloride and Sulphate ions.
			CO – 2	Preparation of Inorganic Complexes such as Nickel-DMG complex, Copper tetraammine complex, Lead-Thiourea complex and trioxalato chromate complexes.
174		Practical - VI (Organic Qualitative Analysis & Organic Preparation)	CO – 1	Organic Qualitative Analysis of general Organic functional groups such as Phenols, Esters, Carboxylic acids, Carbohydrates, Amines, Aldehydes, Ketones, Amides, Diamides, Nitro compounds
			CO – 2	Confirmation of functional groups by preparing Derivatives.
			CO – 3	Preparation of Organic compounds using Acetylation, Benzoylation, Nitration etc.,

175		Inorganic Chemistry – III	CO – 1	To study in detail about the Crystal Field Theory – Octahedral and Tetrahedral Complexes-Ligand Field theory.
			CO – 2	TO study in detail about the Magnetic & spectral properties of transition complexes – spectral series and Orgel energy diagrams.
			CO – 3	A brief study on Organometallic Chemistry
			CO – 4	To study on the basics of Bio Inorganic Chemistry and Inorganic Polymers.
176		Organic Chemistry – III	CO – 1	To study Organic Spectroscopy on UV and IR
			CO – 2	CO – 2 Detailed study on NMR and its applications to Organic Molecules.
			CO – 3	Detailed study of the mechanisms and applications of some important named reactions.
			CO – 4	To study the synthetic applications of enolates – Chemistry of Diethylmalonate – Ethylacetoacetate & Enamines
			CO – 5	To study the Chemistry of Natural product with special focus on Terpenoids and alkaloids – synthesis and structural elucidation of Alpha terpineol – menthol – Nicotine and coniine.
177		Physical Chemistry – III	CO – 1	A detailed and thorough study on ElectroChemistry and EMFs of Cells.
			CO – 2	Elementary study on Quantum Chemistry with focus on the Postulates of quantum mechanics- Schrodinger wave equation – particle in one dimension box.
			CO – 3	To study in detail about the Molecular spectroscopy on Microwave – IR – Raman – Electronic Spectroscopy – basic study on PHYSICAL PROPERTIES AND MOLECULAR STRUCTURE
178		Environmental Chemistry – II		A detailed study on different types of water pollution methods- their effects and their control.
			CO – 1	Study on the different methods of Sewage treatment and solid waste treatment
			CO – 2	Introduction to different experimental methods for the analysis of various parameters of water.
			CO – 3	A brief study on the Chemistry of Food additives & their effects.
179		Practical - VII (Physical Chemistry Practical)	CO – 1	Experiments in Physical Chemistry, which includes
			CO – 2	Determination of Rate Constants of ester hydrolysis, Kinetics of Persulphate oxidation, Determination of Distribution Constants, Determination of CST of phenol- Water system, Determination of Transition Temperatures and Construction of Phase Diagrams.
180		Practical - VIII (Instrumental Methods of	CO – 1	Instrumental Methods of Analysis, which includes

		Analysis)		
			CO – 2	Colorimetric determinations of Manganese and Iron
			CO – 3	Conductometric determination of weak and Strong Acids.
			CO – 4	Ionization Constant of weak acid
			CO – 5	pH metric determination of Weak and Strong Acids.
MASTER DEGREE PROGRAMS				
Economics				
181	ECON	Micro Economic Analysis -1	CO1	Get introduced for learning about consumer behavior and analyzing consumer decisions
	Semester-I		CO2	To understand introductory micro economic theory in a local, regional, national & international scenario
			CO3	Explain the fundamental techniques to think about a number of policy questions
			CO4	It will also help in understanding the efficiency and equity implications of market interference including government policy
182	ECON	Macro Economics - 1	CO1	To make students aware of the basic theoretical framework underlying the field of macroeconomics
			CO2	It enables students to understand determination of equilibrium income and interest rates
			CO3	To derive aggregate demand and supply curves and get expose to wage models
			CO4	Understanding the concept of inflation and Learn about open economy models
183	ECON	Mathematical Economics	CO1	The student is exposed to economic concepts in mathematical format through simple illustrations & prepares the ground for more scientific study
			CO2	Understand abstract ideas and rigorous methods in mathematical analysis to solve practical problems
			CO3	Know the chain rule and use it to find derivative of composite functions and obtain expression for higher order derivatives of a function using the rule of differentiation
			CO4	Evaluate determinants and use them to discriminate between invertible and non-invertible matrices
184	ECON	Econometric Theory	CO1	Understand multiple regression models with applications
			CO2	To learn the development of null & alternative hypothesis & types of errors,
			CO3	To understand the concepts of multicollinearity, autocorrelation and heteroscedasticity

			CO4	To learn how to develop regression model and apply for the specific perspective data in appropriate manner
185	ECON	Economics of Growth & Development	CO1	To explain economic growth theories, international trade development theories and related economic development theories
			CO2	Learn hardcore economic prescriptions to development, concerns hitherto relegated to background like education, health, sanitation and infrastructural development, have found a place of pride in explaining the preference of various economies
			CO3	Student will be able to understand the landscape of Indian economic structure
			CO4	Understand meaning of economic development and its measurement
186	ECON	Micro Economic Analysis -II	CO1	To understand basic micro economic problems related to the operation of real economy
			CO2	It will help students in understanding the behavior of individuals and small organizations in making decisions on the allocation of limited resources
			CO3	It will result in understanding the micro and macro theories of distribution, welfare economics, general equilibrium in closed and open system and analysis of economic behavior under uncertainty
			CO4	To understand the efficiency and equity implications of market interference including government policy
187	ECON	Macro Economic Analysis -II	CO1	To make students aware of the basic theoretical framework underlying the field of macroeconomics
	Semester-II		CO2	It helps students to study the aggregates and to provide overall idea about national economic policies and its implications
			CO3	Apply the principle of Macroeconomics in explaining the behaviour of Macroeconomic variables at national as well as global level.
			CO4	Associate the current economic phenomenon with existing theory and put their views on contemporary economic issues.
188	ECON	Statistical Methods in Economics	CO1	Understand the basic principles underlying survey designs and estimation
			CO2	To train students with essential tools for statistical analysis at post graduate level
			CO3	To present the general theory of statistical distributions as well as the standard distribution found in statistical practice
			CO4	Fostering understanding through real world statistical applications
189		Applied Econometrics	CO1	To learn and develop scientific view to understand the time series data and its analysis
			CO2	To learn stationary and non-stationary time series models

			CO3	Apply auto regressive, moving average, ARMA, ARIMA models, Box Jenkins approach to forecast time series data empirically
			CO4	to develop an ability to analyse and apply some basic stochastic processes for solving real life situations
190		Public Economics	CO1	It will help in understanding analyzing the impact of public policy on the allocation of resources
			CO2	Understand and analyse the distribution of income in the economy
			CO3	Analyse in detail about public expenditures, taxation, budgetary procedures, stabilization instruments and debt issues
			CO4	Get to know about centre and state financial relationships
191	ECON	International Trade & Finance	CO1	The course is helpful to develop a systematic exposition of models that try to explain composition, direction and consequences of international trade
	Semester-III		CO2	The student will be acquainted with economic concepts and models of international trade
			CO3	Understand about international trade blocks and their importance
			CO4	Get exposed to economic environment of international trade
192	ECON	Contributions by Noble Laureates - I	CO1	Students get to know about the greatest contributions made by renowned Economists in the field of economics
			CO2	Understand the contributions made by Hicks, Arrow, Amartya Sen, Kantorovich and Koopmans in the field of welfare economics
			CO3	Students get better understanding about different school of thoughts with regard to open economy, macroeconomics, theory of general equilibrium and development of national account
			CO4	Students get exposed to various tools and mechanisms used in economics proposed by Economists
193	ECON	Computer Applications in Economic Analysis	CO1	The course describes an alternative approach to teaching content by using computer applications that emphasize the empirical testing or applications of the theory
			CO2	Get exposed to various statistical packages viz., E-views and SPSS
			CO3	Understand stochastic process with softwares
			CO4	Get exposed to time series and forecasting models viz, ARMA, , Granger causality , fixed effects and random effects models etc
194		Research Methodology	CO1	Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling

			CO2	Students will have basic knowledge on qualitative research techniques
			CO3	Students will have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis
			CO4	Students will be able basic awareness of data analysis-and hypothesis testing procedures
195		Indian Economy : Issues & Policies – I	CO1	Develop ideas of the basic characteristics of Indian economy, its potential on natural resources
			CO2	Understand the importance , caused and impact of population growth and its distribution, translate and relate them with economic development
			CO3	It will result in comprehensive understanding of Indian economy
			CO4	Student will be able to understand govt. policies and sectoral programmes
196	ECON	Indian Economy : Issues & Policies – II	CO1	It helps in developing understanding of the students relate to different sectors of Indian Economy
	Semester-IV		CO2	After studying the structural aspects of Indian economy students will be able to understand how planning and infrastructure support can develop an economy
			CO3	To give in depth knowledge of banking and finance to the students
			CO4	Student will be able to understand govt. policies and sectoral programmes
197	ECON	Financial Economics	CO1	understand the role of asymmetric information in financial markets
			CO2	Identify the main assumptions driving the results of a model
			CO3	Understand why and how financial frictions lead to inefficient prices
			CO4	Comprehend how trading in derivative markets affect the price of the underlying asset
198	ECON	Contributions by Noble Laureates - II	CO1	The aim of this course is to make Students understand about the greatest contributions made by renowned Economists in the field of economics
			CO2	It helps students to understand the contributions made by Simon Kuznets, Schultz, Lewis, Solow, Fogel in the field of institutional change, development and growth
			CO3	It helps students to think strategically and make decisions to optimize the outcome
			CO4	Studying this course will help students to get exposed to recent developments in economic theory
199		Project Work	CO1	The aim of the course is to make student to take up a mini research topic and to work on it to carry out research activities for further studies
			CO2	It is a well planned, organized and goal oriented work. hence students understand application of economic concepts in real life situations
			CO3	Students get exposure with regard to sampling and collection of data and processing of data

			CO4	Students able apply statistical tools for analyzing economic phenomena with the help of the data and softwares and report writing
Commerce				
200	MAJOR - I	Management Concepts and Organisational Behaviour	CO 1	To provide conceptual understanding of Management concepts, principles and functions.
			CO 2	To facilitate the students how human behavior in the organization could be managed successfully.
			CO 3	Ability to execute managerial tasks of planning, organizing and controlling.
			CO 4	To familiarize with communication motivation and leadership towards directing
			CO 5	In-depth understanding of emotional labour and different types of emotions.
			CO 6	Ability to analyze challenges and opportunities in the field of organization behavior.
201	MAJOR - II	Business Environment	CO 1	As the environment in which an executive in taking business decisions are keep changing from time to time the Managers are expected to know about that he/she guess the situation and takes the wise Managerial decisions.
			CO 2	Skill to identify and differentiate various Micro and Macro factors affecting functioning of Business.
			CO 3	Ability to analyze Indian Economy in light of changing government regulatory policies.
			CO 4	Ability to file complaint against unfair trade practices under Consumer Protection Act.
			CO 5	Familiarization with the objectives and strategies in Economic planning with special reference to Planning Commission .
			CO 6	Familiarization with the Theoretical Framework of International and Technological Environment.
202		Accounting for Managerial Decisions		
	MAJOR - III		CO 1	To understand concepts of Management Accounting.
			CO 2	The practical application for managerial decision making
			CO 3	To develop the skills to analyze the Financial Statements.
			CO 4	To apply and analyze different types of activity-based management tools through the preparation of estimates.
			CO 5	To analyze Cost-Volume-Profit techniques to determine optimal managerial decisions.
			CO 6	To impart highly relevant skills in areas such as budgeting and decision making which will enable to identify the most effective profitable opportunities and to contribute significantly to better management within the organization.

203				
	MAJOR - IV	Statistical Analysis	CO 1	To bring out clearly the importance of statistics in solving different research problems.
			CO 2	To enable the students in-depth understanding of the concepts of probability, sampling, correlation and their applicability
			CO 3	To help the students gain a comprehensive view of the usage and importance of SPSS in solving different statistical problems.
			CO 4	Development of logical reasoning ability in students.
			CO 5	Knowledge about the applicability of various parametric and non-parametric tests.
			CO 6	Ability to make decisions under uncertain business situations.
204	MAJOR - V	Human Resource Management	CO 1	To provide the students to understand the functions, process and task of Human Resource Management.
			CO 2	To develop among students various practices followed by HR managers.
			CO 3	To create understanding about recent trends and innovations in HRM
			CO 4	To familiarize recruitment and selection, Training & Development procedures
			CO 5	To know the methods of wage and salary administration – compensation plans
			CO 6	Knowledge regarding the developing role of human resource management in the globalized world.
205	MAJOR - VI	Managerial Economics	CO 1	Aims at enabling the managers in different spheres to take wise managerial decisions in the areas like production, pricing, distribution and Marketing to benefit all the stake holders
			CO 2	Ability to forecast demand in light of changing circumstances and to formulate business plans.
			CO 3	Ability to chalk out Business Policies.
			CO 4	Knowledge about Profit Planning and control.
			CO 5	· Interpret regression analysis and discuss why it's employed in decision-making.
			CO 6	· Skill to analyze effects of Government Policies.
206	MAJOR - VII	Advanced Financial Accounting	CO 1	To understand and apply financial accounting tools and techniques for managerial decision making
			CO 2	To inculcate the competency to the students to solve problems relating Special areas in accounting including accounting for Services Sector.
			CO 3	To understand the Financial Reporting Practices.
			CO 4	To impart knowledge of a theoretical foundation for the preparation and presentation of financial statements

			CO 5	To inculcate the understanding of rules of measurement and reporting relating to various types of business entities.
207	MAJOR - VIII	Marketing Management	CO 1	To make students understand the role of marketing managers to plan implement and control marketing activities and managing the marketing mix
			CO 2	To know the modern marketing concepts and evaluation.
			CO 3	Ability to understand the changing Marketing Environment.
			CO 4	Knowledge of different consumer and business buying behaviors.
			CO 5	Familiarization with product related decisions.
			CO 6	To explore the place mix and strategies decisions
208	MAJOR - IX	Financial Management	CO 1	To understand the conceptual framework of financial management and its applications under appropriate decision making situations
			CO 2	To introduce the students about the importance of Finance Management for a business.
			CO 3	To enable students to select an investment project out of alternative investment proposals.
			CO 4	To enable them to understand the various modes and techniques of managing the financial resources of an organization.
				To know about the various factors to be considered while planning for financial policies
			CO 5	
			CO 6	To acquaint the students regarding the various types of decisions taken by financial managers in current competitive environment.
209	MAJOR - X	Entrepreneurial Development and MSME Management	CO 1	To realize the importance of entrepreneurship qualities required for small business management.
			CO 2	Have the ability to discern distinct entrepreneurial traits
			CO 3	Know the parameters to assess opportunities and constraints for new business ideas
			CO 4	Understand the systematic process to select and screen a business idea
			CO 5	Design strategies for successful implementation of ideas
			CO 6	Identify the evaluation of Project and write a business plan
210	MAJOR - XI	Financial Markets And Services	CO 1	To impart knowledge on various financial markets and their services.
			CO 2	To introduce the students about Financial System prevalent in India
			CO 3	To impart knowledge about the structure of development banks in India
			CO 4	To understand the Central Banking Operations, functions of NBFCs, Factoring and Venture capital companies in India.

			CO 5	To enable the students to understand the progress of Government securities markets, Treasury Bill market, Commercial Paper Market and Certificate of Deposits Market in India.
			CO 6	Detailed understanding about the Banking Structure of the country and its recent developments.
211	MAJOR - XII	Economic Legislation	CO 1	To provide students knowledge on various economic legislations required for running a business organization
			CO 2	Students understand the regulations and provisions of Trade, Competition and Consumer Protection.
			CO 3	Understand the regulations and provisions of Essential Commodities and Standards of Weights and Measures
			CO 4	Understand Management of Foreign Exchange Transactions
			CO 5	Understand the laws relate to Intellectual property, copy right law & enforcement.
			CO 6	Understand the Securities and Exchange Board of India Act,1992
212	MAJOR - XIII	Corporate Tax Planning	CO 1	To understand the innovative ideas in corporate tax in India.
			CO 2	To give expert advices to whom is required regarding various tax issues for decision making.
			CO 3	To familiarize the concepts of Tax Planning and Tax Management.
			CO 4	To understand the concept of Corporate taxation and Computation income from business.
			CO 5	To familiarize Tax Issues Relating to Business Restructuring
			CO 6	To acquaint knowledge related to Tax payments - TDS – TCS – Advance payment of Tax
213	OPTION PAPER I	Advertising and Sales Promotion	CO 1	To enable the students to learn the fundamentals of advertisements and steps involved in selling process
			CO 2	To introduce the various principles adopted for advertising and marketing different products
			CO 3	Ability to study market trends and consumer behavior.
			CO 4	Understanding of sales milestones, sales situations, selling styles and sales strategies followed by different business houses
			CO 5	Ability to connecting advertising strategies and organizational goals with the moral code of conduct in advertising
			CO 6	Skill to targeting new business and exploit new areas of opportunity.

214	OPTION PAPER II	Marketing Research	CO 1	To give exposure to students the techniques of market research & To enhance the students understanding of the marketing research industry.
			CO 2	To develop skills required by the researcher and understand different applications of Marketing Research in Marketing Decision-making.
			CO 3	To help students develop their research, inquiry and communication skills while providing a road map to their future career in Marketing or International Business.
			CO 4	To provide students with an overview of career opportunities in Marketing and International Business.
			CO 5	To explore different approaches of Marketing research.
			CO 6	To understand the process by which market information is collected and analysed and to apply this understanding to the development of a marketing plan in response to a real life client problem.
215	MAJOR XIV	Strategic Management	CO 1	Aims at familiarizing with different aspects of strategy and evaluating the decisions based upon the basic/strategic situation.
			CO 2	To describe the role of strategic management in the success of successful companies.
			CO 3	Familiarization with the strategic management process.
			CO 4	Understanding about the techniques to scan an environment and the role of environment scanning in hurdle less strategic management of an organization.
			CO 5	Understanding about the equal importance of strategy formulation and strategy implementation.
			CO 6	Clarity about the strategies followed by different companies in the corporate world.
216	MAJOR XV	E-Commerce	CO 1	To impart knowledge about the relevance of E-Commerce in current competitive environment.
			CO 2	To make the students aware about the common legal, ethical and tax issues involved in e-commerce.
			CO 3	To develop understanding of the working of online shopping and e-payment.
			CO 4	Ability to start up and operate e-commerce website.
			CO 5	Familiarization with online payment services and different cyber laws.
			CO 6	Ability to understand customer relationship life.
217	MAJOR XVI	Corporate Reporting Practices	CO 1	To provide students knowledge on various accounting standards applicable in Corporate business.
			CO 2	Identify and understand the whole spectrum of corporate reporting practices.
			CO 3	Describe the objectives of financial statements and the qualitative characteristics of financial statements.

			CO 4	Interpret and apply International Accounting Standards and interpretations adopted by the International Accounting Standards Board (IASB).
			CO 5	Analyze and evaluate financial statements, and prepare detailed reports thereon, tailored to the technical understanding of the different user groups.
			CO 6	Evaluate and discuss the main issues currently facing the professional accountant in the field of financial reporting, including the professional and ethical duties of the accountant.
218	OPTION PAPER III	Brand Management	CO 1	To enable the students to learn the fundamentals of brand management and strategies.
			CO 2	To introduce the students about various brand related issues viz. Brand Management, Brand Equity and Brand Loyalty
			CO 3	Familiarization with Brand Management, Brand Equity and product branding strategies.
			CO 4	Ability to measure Brand Performance using Research techniques.
			CO 5	Understanding of various Retail formats and Retail locations.
			CO 6	Ability to integrate Retail Supply Chain.
219			OPTION PAPER IV	Services Marketing
	CO 2	To impart knowledge regarding customer expectations from services and their perceptions about it.		
	CO 3	Capability to evaluate the suitability of different pricing methods for services.		
	CO 4	Understanding of the roles of employees and customers in service delivery.		
	CO 5	Capability to analyze different service quality models.		
	CO 6	Ability to analyze and interpret marketing research findings.		
Chemistry				
220	CH-401	Inorganic Chemistry – I	CO 1	Have a detailed study of the different theories proposed on covalent bonding, applications of V.B & M.O-structure of boranes.
			CO 2	Understanding the nature of ionic bonding in crystals, solving the problems on energetics of ionic bonding.
			CO 3	Understanding the different theories of solid-semiconductors -superconductivity.
			CO 4	Evaluate the problems based on Solid State Chemistry
			CO 5	To understand radioactive decay, types of nuclear reactions--radioactive techniques.

221	CH-421	Organic Chemistry – I	CO 1	CO-1 Understanding the nature of Chemical Bonding in Organic molecules. Evaluate the problems based on aromaticity and supramolecular chemistry.
			CO 2	CO-2 Understanding the concept of configuration and confirmation of stereo chemistry. Apply their understanding about the organic reactions of industrial significance with respect to chemo selectivity, regio selectivity and enantioselectivity. Analyse the product distribution and the stereochemistry of various organic products.
			CO 3	CO-3 Evaluate the organic reactions based on the influence of substituents on substrate molecules and nature of solvent
			CO 4	CO-4 Analyse the product distribution and the stereochemistry of various organic products in addition and substitution products.
			CO 5	CO-5 Design new organic reactions in order to achieve the required products
222	CH-441	Physical Chemistry – I	CO 1	CO – 1 Student should be able to calculate thermodynamic properties of ideal and real gases and also absolute entropy of a system.
			CO 2	CO-2 To study the physical methods of surfaces --Determination of surface area-- Kinetics of surface absorption
			CO 3	CO – 3 Students should able to understand the concept of macromolecules
			CO 4	CO – 4 Evaluate the problems based on Debye-Huckel Limiting Law. All theories in electrochemistry to analyse electrode kinetics and plot potential Vs current, surface coverage vs Potential, concentration profile vs distance from the electrode.
			CO 5	CO – 5 Calculate the rate constants of parallel and Opposing reactions and derive the rate expressions of chain reactions for the formation of hydrogen halides by applying steady state approximation. Explain the kinetics of fast reactions using various instrumentation techniques.
223	CH-400	Practical - I Inorganic Chemistry-I	CO 1	CO-1 Prepare exact solutions for quantitative analysis
			CO 2	CO-2 apply the knowledge of quantitative analysis for the determination of metals from ores/alloys.
			CO 3	CO-3 Synthesize inorganic complexes and also find their purity.
			CO 4	CO-4 Understand paper chromatography and Ion-Exchange chromatography.
224	CH-402	Inorganic Chemistry – 2	CO 1	CO – 1 To have a detailed under understanding about crystal field theory, molecular orbital theory for coordination compounds.

			CO 2	CO – 2 Evaluate the magnetic nature and spectral characteristic of coordination compounds based on Russel sanders coupling schemes--charge transfer spectra--
			CO 3	CO – 3 To understand the stability and reactivity of organometallics like carbonyls, nitrosyls, metallocenes.
			CO 4	CO - 4 Understanding reaction mechanism in transition metal complexes.
			CO 5	CO – 5 understanding the oxidative, reductive elimination, insertion reactions, olefin hydrogenation, hydroformylation reactions of organometallic compounds & catalysis.
225	CH-422	Organic Chemistry – 2	CO 1	CO – 1 A detail study on elimination reactions in organic compounds and to identify the stereoselective formation of products in the reactions.
			CO 2	CO – 2 To understand the oxidation and reduction reactions on organic molecules.
			CO 3	CO – 3 To study theoretical aspects of concerted reactions--PMO approach--FMO--Sigma tropic rearrangements.
			CO 4	CO – 4 To study the principles of photochemical reactions, evaluation of expected product formation in the reaction.
			CO 5	CO – 5 A detailed and thorough studies on Biomolecules like carbohydrates, lipids, monoacids, Nucleic acids.
226	CH-442	Physical Chemistry -2	CO 1	CO – 1 To study different aspects in advanced Statistical thermodynamics
			CO 2	CO – 2 A detail study on concepts of nonequilibrium thermodynamics
			CO 3	CO – 3 To understand molecular reaction dynamics
			CO 4	CO – 4 To understand Electrochemistry-II
			CO 5	CO – 5 A detailed study on basic principles of quantum chemistry
227	CH-420	Practical - II Organic Chemistry –II	CO 1	CO – 1 Imparting training in synthesis of organic molecules and in analysis of chemical and instrumental methods.
			CO 2	CO – 2 Understand the importance of different instrumental methods in chemical analysis of materials.
			CO 3	CO – 3 Recall the importance of the analysis of organic molecules. Understand the qualitative analysis of mixtures, the functions of various reagents and reaction mechanisms.
			CO 4	CO – 4 Evaluate the properties of synthesized organic products and their derivatives through spectroscopic and analytical data.
228	CH-501	Inorganic Photo Chemistry & Bio inorganics	CO 1	CO – 1 A detailed study of chemistry of essential and trace elements in biological processes.

			CO 2	CO – 2 A detailed and thorough study on kinetics of inorganic photochemical reactions
			CO 3	CO – 3 To understand advanced topics in inorganic photochemistry and redox reactions.
			CO 4	CO – 4 To understand role of metalloenzymes like zinc, iron, copper in biological processes.
			CO 5	CO-5 A detailed and thorough study on function of haemoglobin, myoglobin, haemocyanins, ferridoxin, Rubredoxins etc.
229	CH-521	Organic Spectroscopy	CO 1	CO – 1 To understand the basic principles of UV-VIS & NMR Spectroscopy, solve the problems on UV-VIS & NMR Spectroscopy
			CO 2	CO – 2 To study the basic principles & theory of NMR spectroscopy
			CO 3	CO – 3 A detailed and thorough study on Applications of ^1H NMR, ^{13}C NMR, 2D NMR.
			CO 4	CO – 4 A detail study on principle and Applications of Mass Spectrometry.
			CO 5	CO – 5 To know how to solve the problems based on UV, IR, Mass, NMR data
230	CH-541	Physical Chemistry -3	CO 1	CO – 1 To understand the symmetrical aspects in molecules and application of group theory in chemistry.
			CO 2	CO – 2 Recall the fundamental principles of Quantum chemistry--Applications of particle in 1D, 2D,3D boxes-Simple Harmonic oscillator
			CO 3	CO – 3 A detailed and thorough study on Variation and Perturbation methods--Slater determinants and Hartree - Fock Self-Consistent field for atoms
			CO 4	CO – 4 To understand the principles and applications of Vibrational, Rotational, Raman--Applications of molecular spectroscopy.
			CO 5	CO-5 A detailed and thorough study on basic principles of NMR Spectroscopy--ESR spectroscopy and NQR spectroscopy.
231	CH-540	Practical - III Physical Chemistry	CO 1	CO – 1 To impart training in operating instruments used in the analysis of various chemical constituents.
			CO 2	CO – 2 Design experiments in Physical Chemistry and Analytical Chemistry using potentiometry, Conductometry, Fluorimetry, colorimetry, chromatography.
			CO 3	CO – 3 Apply concepts of Physical Chemistry and Analytical Chemistry through experimentation.
232	CH-572	Advanced Topics in Chemistry	CO 1	CO – 1 Recall the fundamental principles of organic reactions. Understand the concepts related to synthesis, mechanisms and the functions of various reagents or catalysts.
			CO 2	CO – 2 Apply their understanding about the synthetic methodologies of organic chemistry--Basic principles of Retrosynthetic approach--Protecting groups of alcohols,

				amines, carbonyl and carboxyl groups.
			CO 3	CO – 3 To apply retrosynthetic approaches for designing a synthetic route for synthesis of target molecule-one group C-C connections, two group C-C connections.
			CO 4	CO – 4 To understand the advanced topics in Solid State Chemistry
			CO 5	CO – 5 Application of quantum chemistry principles to Hybridization of orbitals, Hückle and SCF theory-Hellman & Feynman theorem.
233	CH-582B	Natural Products Chemistry and Heterocycles (Elective)	CO 1	CO – 1 To study isolation and general methods of structural determination of Terpenoids and Carotinoids
			CO 2	CO – 2 To study isolation, Biosynthesis and general methods of structural determination of Alkaloids like Ephedrine, Nicotine, Atropine, Quinine.
			CO 3	CO – 3 A detail study on Steroids like Cholesterol, Bile acids, Testosterone, Progesterone etc.,
			CO 4	CO – 4 To study the chemistry of three membered, four membered heterocycles and their applications.
			CO 5	CO-5 To study the structure & synthesis of six membered hetero cycles with multiple hetero atoms.
234	CH-570	Project/Review Work	CO 1	CO -1 Enhance the scientific temper among the students so as to develop a research culture and implementation of the policies to tackle the burning issues at global and local level.
			CO 2	CO -2 Collaborate effectively on team -oriented projects in the field of Chemistry or other related fields. Communicate scientific information in a clear and concise manner both orally and in writing.
235	CH-580	Lab Course (Elective)	CO 1	CO -1 How to synthesize organic molecules
			CO 2	CO -2 How to maintain reaction conditions
			CO 3	CO -3 Arrangement of assembly
			CO 4	CO -4 How to follow reaction by using thin layer chromatography
			CO 5	CO -5 Methods of purification of sample