BABU JAGIVAN RAM GOVERNMENT DEGREE COLLEGE

Narayanaguda, Hyderabad

Program Outcomes
Program Specific Outcomes
Course Outcomes

I. Programs Offered

Undergraduate Programs

I. B.A

II. B.Sc (Biological Sciences/Life Sciences)

1. **BZC: Botany, Zoology, Chemistry**

III. B.Sc (Physical Sciences)

1. **MPC: Maths, Physics, Chemistry**
2. **MPCS: Maths, Physics, Computer Science**
3. **MSCS: Maths, Statistics, Computer Science**

IV. B.Com

1. **B.Com (General)**
2. **B.Com (Computers)**
3. **B.Com (Computer Applications)**

II. Program Learning Objectives

S.No	Program	Learning Objectives of Programs
1	**B. A. (E.P.P)** Economics, Public Administration, Political Science	The UG program B.A (EPP) deals with contemporary societal issues and their solutions. Following are the B.A Program Outcomes : 1. To develop conceptual, analytical and critical thinking among the students. 2. To make them understand the contemporary social issues and societal problems. 3. To inculcate research aptitude in the students. 4. To provide a holistic perspective on society to the students. 5. Students will be prepared for a wide range of careers like Public services, Academics, Private sector, NGOs etc. 6. To make the students appreciate and understand the inter relation between theory and practice. 7. To enhance the ability of students to provide innovative solutions to the problems confronted by society. **8.** To develop interpersonal competencies like leadership and teamwork among the students.
2	**B. A (H.E.P)**	The UG program B.A (HEP) gives widened perception of National and International aspects to the student. Following are the program outcomes: 1. Students of H.E.P acquire in depth knowledge in the social sciences. 2. Good grounding in theoretical and practical aspects prepares themselves for competitive examinations and other academic careers. **3.** The perception and outlook of students will be widened as they gain international and national perspective on different aspects.
3	**B.Sc. (BZC)** Botany, Zoology, Chemistry	The Option of the B.Sc. Science degree is geared toward students whose interests and skills in science are more cross-disciplinary. The educational objectives of the Option are to produce graduates:

		• Who become well versed in a broad range of topics in the sciences and gain knowledge of the sciences, with a concentration in one of the sciences course. • The students are prepared to further their higher education at Post graduate level and/or directly pursue productive professional careers in the private, state, or educational sectors. • The students are motivated and trained in application of higher-level learning skills in critical thinking and problem solving as applied to science issues. • The stakeholders can inculcate knowledge by which they can effectively apply the scientific method. • They can utilize the cross-disciplinary research literature to analyze and synthesize science issues and their socio-economic and political implications. • In their future careers they will be able to work both on cross-disciplinary teams and function independently as specialists in a science or technical field. • This makes B.Sc degree a very important weapon in arsenal and opens a plethora of opportunities for further studies.
4	**B.Sc. (MPC)** Mathematics, Physics, Chemistry	The Undergraduate program B.Sc. MPC has become the standard science degree for several years. Objectives of this program include: • Becoming competent in the fundamental streams of physical sciences at under graduate level. • Understanding the chemical properties of matter useful for societal life. • This program enables the students to apply their knowledge solving the problems in a scientific way. • Students can also make Inter-disciplinary research using this program through analysis and synthesis while applying issues related to social or economic societal issues.

		• This program gives a diversified of future direction to the students either to choose for further education or to get into a right career.
5	**B.Sc. (MPCs.)** Mathematics, Physics, Computer Science	The Option of the B.Sc. MPCs degree drives the student towards core basic concepts of physical and mathematical sciences along with their interdisciplinary fields. Objectives of this program include: • Becoming competent in the fundamental streams of physical sciences at under graduate level. • The acquired competence can give students enough preparation to pursue higher education at Post graduate level. Students can also choose to opt Professional courses like MCA or MBA in the state of national institutes. • With the subject of Computer Science along with Mathematics and Physics, the students could able to deal with critical thinking and problem solving applied to real world computational problems. • Core basic sciences of this Program enable the students to apply their knowledge solving the problems in a scientific way. • Students can also make cross-disciplinary research using this program through analysis and synthesis while applying issues related to social or economic societal issues. • The student who pursued this program can get the ability to work both on diversified teams and work independently as an expert in a scientific or technical domain. • This program gives the student a big leap in his further education as well as career giving heterogeneous opportunities.
6	**B.Sc. (MSCs.)** Mathematics, Statistics, Computer Science	The Option of the B.Sc. MSCs degree acts as a driving force for the student towards core basic concepts of mathematical sciences, Statistical sciences along with their interdisciplinary fields. Objectives of this program include: • Becoming competent in the fundamental streams of Statistical Sciences at under graduate level.

		• The acquired competence can give students enough preparation to pursue higher education at Post graduate level. Students can also choose to opt for Professional courses like MCA or MBA in the state of national institutes. • With the subject of Computer Science along with Mathematics and Physics, the students could able to deal with critical thinking and problem solving applied to real world statistical problems. • Core basic sciences of this Program enable the students to apply their statistical and computational knowledge solving the problems in a holistic way. • Students can also make cross-disciplinary research using this program through numerical analysis and optimization techniques to deal with issues related to societal issues. • The student who pursued this program can get the ability to work both on diversified teams and work independently as an expert in a scientific or technical domain. • This program gives the student a big leap in his further education as well as career giving heterogeneous opportunities.
7	**B.Com. General**	• To equip students with the knowledge and competence in the field of business and commerce. • To provide the desired level of knowledge exposure in the context of ever changing global business environment.
8	**B.Com. Computer Applications**	• To pursue a professional career and/or furthering higher education in the specified areas of specialization. • To create an additional avenue of self-employment and also to benefit Industry by providing them with suitably trained persons in the field of commerce.
9	**B.Com (Computers)**	• To prepare the students to explore the opportunities existing in the field of commerce and business

III. Program Outcome and Program Specific Outcomes

S.No	Program	Program Outcome	Program Specific Outcomes
1	**B. A. (EPP)** Economics, Public Administration, Political Science	The UG program B.A (EPP) deals with contemporary societal issues and their solutions. Following are the B.A Program Outcomes : 1. To develop conceptual, analytical and critical thinking among the students. 2. To make them understand the contemporary social issues and societal problems. 3. To inculcate research aptitude in the students. 4. To provide a holistic perspective on society to the students. 5. Students will be prepared for a wide range of careers like Public services, Academics, Private sector, NGOs etc. 6. To make the students appreciate and understand the inter relation between theory and practice.	The Specific outcomes of this program include: 1. Students will acquire an in-depth knowledge of Economics, Political Science and Public Administration. 2. This course will provide an experiential learning to students. 3. This program enables them to go for higher education and also offers wider opportunities to pursue research. 4. This program creates a sound base and helps the students to write competitive examinations.

		7. To enhance the ability of students to provide innovative solutions to the problems confronted by society. 8. To develop interpersonal competencies like leadership and teamwork among the students.	
2	**B. A (H.E.P)**	The UG program B.A (HEP) gives widened perception of National and International aspects to the student. Following are the program outcomes: 1. Students of H.E.P acquire in depth knowledge in the social sciences. 2. Good grounding in theoretical and practical aspects prepares themselves for competitive examinations and other academic careers. The perception and outlook of students will be widened as they gain international and national perspective on different aspects	Specific outcomes of this program include**:** 1. Students of H.E.P acquire in depth knowledge in the social sciences. 2. Good grounding in theoretical and practical aspects prepares them for competitive examinations and other academic careers. 3. The perception and outlook of students will be widened as they gain international and national perspective on different aspects.
3	**B.Sc. (BZC)**	Graduates of the program are expected with the	• The key advantages of these Life Science graduates have is that

	Botany, Zoology, Chemistry	following positive outcomes: • The student will develop a strong ability to apply knowledge in the sciences, the humanities & social sciences, the arts, and political sciences to explore and understand various science issues. • They will be mould with an aptitude for designing, conducting, and communicating the results of literature-based research on current science topics. • They will gain well-developed skills in analysis and research acquired through courses, lab work, internship, undergraduate research. • To work productively as individuals and in cross-disciplinary teams. • To effectively communicate science concepts and issues to diverse audiences.	of choice. They have a wide range of options available in terms of subjects, topics, fields and other associated as mentioned above to pursue their graduation degree in. B.Sc graduates can opt to join a postgraduate level degree programme in their respective field or subject to pursue further studies. • Some students have also been known to opt for non-science master degree programmes like journalism, animation, computer technology, management, hospitality sector and many others as their field of study after completion of their B.Sc graduation. • It provides excellent preparation for careers in biological research, biotechnology, law, conservation, public policy, and science writing, as well as the health professions,

		• Will have comprehensive understanding of major science issues faced by global society today. • An ability to understand and use selected techniques and analytical/survey tools in the practice of science	including medicine, veterinary medicine and public health. • After completing B.Sc. degree one can get employed in non-scientific sectors in addition to scientific sectors. They can seek out for career in research laboratories, Government corporations, banking and finance sector and so on. Apart from this, Life Science Graduates can also find jobs in IT industry, business, BPO, marketing, Technical Writing and So on.
4	**B.Sc. (MPC)** Mathematics, Physics, Chemistry	• Becoming competent in the fundamental streams of physical and Chemical sciences at under graduate level. • Understanding the physical and chemical properties of matter useful for societal life. • This program enables the students to apply their knowledge solving the problems in a scientific way.	• Gain knowledge of Physical and chemical sciences through theory and practical approach. • Understand and apply principles of Physical and chemical sciences for understanding the specific phenomenon in classical and modern sciences. • Develop research oriented skills. • Make aware and handle the

		• Students can also make Inter-disciplinary research using this program through analysis and synthesis while applying issues related to social or economic societal issues. • This program gives a diversified of future direction to the students either to choose for further education or to get into a right career.	sophisticated instruments /equipment's for their use to solve real-world problems.
5	**B.Sc. (MPCs.)** Mathematics, Physics, Computer Science	The Option of the B.Sc. MPCs degree drives the student towards core basic concepts of physical and mathematical sciences along with their interdisciplinary fields. Objectives of this program include: • Becoming competent in the fundamental streams of physical sciences at under graduate level. • The acquired competence can give students enough preparation to pursue higher education at Post graduate level. Students can also	The Specific outcomes of this program include: 1. Students will acquire an adequate knowledge Mathematics, Physics, and Computer Sciences. 2. This course will provide a thorough knowledge through experimental learning to the students. 3. This program acts as a standard science stream base to pursue further higher education or to opt for career after graduation. 4. The curriculum has been equipped with end-to-end syllabus to

		choose to opt Professional courses like MCA or MBA in the state of national institutes. • With the subject of Computer Science along with Mathematics and Physics, the students could able to deal with critical thinking and problem solving applied to real world computational problems. • Core basic sciences of this Program enable the students to apply their knowledge solving the problems in a scientific way. • Students can also make cross-disciplinary research using this program through analysis and synthesis while applying issues related to social or economic societal issues. • The student who pursued this program can get the ability to work both on diversified teams and work independently as an expert in a	crack Civil Services and other Competitive Exams. 5. This program is the best stepping stone for a student if they wish to choose a scientific career after graduation. 6. Gain knowledge of Physics through theory and practical approach. 7. Understand and apply principles of Physics for understanding the specific phenomenon in classical and Quantum physics. 8. Develop research oriented skills. 9. Make aware and handle the sophisticated instruments /equipments

		scientific or technical domain. • This program gives the student a big leap in his further education as well as career giving heterogeneous opportunities.	
6	**B.Sc. (MSCs.)** Mathematics, Statistics, Computer Science	The Option of the B.Sc. MSCs degree acts as a driving force for the student towards core basic concepts of mathematical sciences, Statistical sciences along with their interdisciplinary fields. Objectives of this program include: • Becoming competent in the fundamental streams of Statistical Sciences at under graduate level. • The acquired competence can give students enough preparation to pursue higher education at Post graduate level. Students can also choose to opt for Professional courses like MCA or MBA in the state of national institutes. • With the subject of Computer Science along with	The Specific outcomes of this program include: 1. Students will acquire an adequate knowledge Mathematics, Statistics, and Computer Sciences. 2. This course will provide a thorough knowledge through experimental and experiential learning to the students. 3. This program acts as a standard science stream base to pursue further higher education in the field or statistical sciences, mathematical sciences or in Computer Sciences. 4. The curriculum has been designed to bring out the best researchers, statisticians, and upcoming scientists for the nation.

		Mathematics and Physics, the students could able to deal with critical thinking and problem solving applied to real world statistical problems. • Core basic sciences of this Program enable the students to apply their statistical and computational knowledge solving the problems in a holistic way. • Students can also make cross-disciplinary research using this program through numerical analysis and optimization techniques to deal with issues related to societal issues. • The student who pursued this program can get the ability to work both on diversified teams and work independently as an expert in a scientific or technical domain. • This program gives the student a big leap in his further education as well as career giving	5. This program is the best stepping stone for a student if they wish to choose a research or scientific career after graduation.

		heterogeneous opportunities.	
7	**B.Com. General**	• Develop an understanding of various commerce functions such as Finance, Accounting, Financial analysis, project evaluation, and cost accounting. • Have global exposure of complex commerce problems and find their solution, process information by effective use of IT tools. • Develop self-confidence and awareness of general • issues prevailing in the society	• There is a wide scope for these graduates in the form of Financial Analysts, Human Resource Managers, Marketing Executive, Tax Analysts, Business Analysts, etc. • Courses like Information Technology, Computerized Accounting, Web Technologies, Fundamentals of C language and Object-Oriented Program with C++ will enable the students to meet the requirements of technical competencies • Provides knowledge competence and skills in setting up their own consultancies with the strong foundation on foreign trade Procedures and practices. • There is high demand for these graduates in Manufacturing
8	**B.Com.** (Computer Applications)		
9	**B.Com** (Computers)		

			• Companies, Export, Trading houses • Consumer Durable Industry, Financial concerns, Banks, • Financial Institutions, Insurance Industry, FMCG Industry, • PSUs, NGOs, Multinational corporations, Service Industry, Marketing Industry • Enables the students about entrepreneurship and capable of making decisions at personal and professional level.

IV. Course Outcomes

B.Sc (Biological Sciences/Life Sciences) : Course Outcomes				
S.No	**Course Code**	**Course Title**	**Course Objectives and Outcomes**	
1	**BS 104**	**Paper:-I :-** **Microbial Diversity of Lower Plants**	C-1	To enable the student to understand and gain theory & practical knowledge on the evolution of life, microbial diversity and cryptogams
			C-2	Apply basic microbiology concepts to solve daily problems related to microbial issues
			C-3	Attain knowledge of plant diseases and control measures
			C-4	To study the cultivation and Economic importance on Bio-Fertilizers ,Mushroom Cultivation which help the student to have self employment opportunity
2	**BS 204**	**Paper:-II:-** **Bryophyta, Pteridophyta, Gymnosperms and Paleo botany**	C-1	To enable the student to understand and gain theory & practical knowledge on the cryptogams with alternation of generation and evolution of stele
			C-2	Gain knowledge about the features and reproductive adaptations of mosses and other bryophytes
			C-3	To study Fossils, fossilization, Importance of fossils and Geological time scale
3	**BS 304**	**Paper:-III :-**	C-1	To enable the student to understand and gain theory & practical knowledge on the classification of plant kingdom and the bases of classification

		Taxonomy of Angiosperms and Medicinal Botany	C-2	To gain Theoretical and Practical Knowledge and have Hands on Experience in identifying different Taxa and its special characters, preparation of Herbarium
			C-3	Medicinal plants and its use in daily life, Primary health care, Pharmacognosy, and traditional medicine
			C-4	Identify medicinal plants (family/genus -level) identify by name and understand the effects of plant chemical constituents on humans
4	**BS 404**	**Paper:-IV :-** **Plant Anatomy, Embryology and Palynology.**	C-1	To gain Theoretical and Practical Knowledge on Pollination Mechanism, process of fertilization and Embryo development
			C-2	Study of composition of the plant body and variations in different plant species
			C-3	Understand the development of male and female gametophytes
5	**BS 503**	**Paper:-V :-** **Cell biology & Genetics**	C-1	To enable the student to understand and gain theory & practical knowledge on the unit of life, unit of hereditary, special chromosomes
			C-2	Learn the major stages of the cell cycle
			C-3	To understand and gain theory & practical knowledge on Mutations and Gene expression
			C-4	Recognize the roles of the major cell organelles

6	**BS 506**	**Elective-A:-** **Ecology& Biodiversity**	C-1	To enable the student to understand and gain theory & practical knowledge on the ecosystem so as to bring awareness on different environment
			C-2	They will gain Theoretical and Practical Knowledge on Biodiversity and conservation of Biodiversity
			C-3	Importance of Ex-situ and In-situ conservation of Biodiversity ,Hot spots of India, Threatened and Endangered species
7	**BS 603**	**Paper:-VI:-** **Plant Physiology**	C-1	To enable the student to understand and gain theory & practical knowledge on the Physiology in plant Cell like role enzymes, nitrogen metabolism, lipid metabolism.
			C-2	To study the role of growth hormones in plant development
			C-3	Importance of mineral nutrition, transpiration, photosynthesis and respiration
8	**BS 606**	**Elective-C:-** **Tissue culture & Biotechnology**	C-1	To enable the student to understand and gain theory & practical knowledge on the plant tissue culture techniques
			C-2	Biotechnology the emerging subject which has lot of practical applications and is research oriented.
			C-3	To understand and gain theory & practical knowledge on Recombinant –DNA Technology
9	**Zoo Code: BS105**	**Animal Diversity-Invertebrates**	C-1	Study and identification of Invertebrates from Protozoa to Echinodermate

			C-2	To differentiate the Canal system in sponges and Spicules. Polymorphism in Siphonophora
			C-3	To describe the Parasitic Adaptations in Helminthes
			C-4	To understand the Evolutionary significance of Coelome and Coelomoducts and metamerism. Pearl formation
			C-5	Significance of Echinoderms larval forms
10	**Zoo Code: BS205**	**Animal Diversity-Vertebrates**	C-1	Study and Identification of Vertebrates form Hemichordates to Mammalians
			C-2	Study of Protochordates.
			C-3	Differentiate the Types of Scales and types of Fins
			C-4	Understand Parental care in amphibian; neoteny and paedogenesis. Distinguish the characters of Poisonous and Non poisonous snakes
			C-5	Patterns of Migration in Birds and Aquatic adaptations in Mammals
11	**Zoo Core III**	**Animal Diversity-Vertebratesand Developmental Biology**	C-1	To differentiate between Urochordata, Cephalochordata, Cyclostomata
			C-2	Understand Parental care in amphibian; neoteny and paedogenesis
			C-3	Distinguish the characters of Poisonous and Non poisonous snakes. Rhynchocephalia.
			C-4	Describe the dental formula and Aquatic adaptations in Mammals

			C-5	To understand the various stages of Developing of Zygote to Embryo
12	**Zoo** **Core IV**	**Cell Biology, Genetics &Evolution**	C-1	Understanding of Basic structure of Cell and Cell division
			C-2	To have basic knowledge of Nucleic acids, process of protein synthesis.
			C-3	To refresh the knowledge of Mendel's Laws, sex linked inheritance ect.
			C-4	To know more about Mutations leading to Evolutions
			C-5	The Causes and Role of Extinction in Evolution
13	**Zoo** **DSE I**	**Physiology and Biochemistry**	C-1	To gain Knowledge of Animal Physiology and organelle functioning
			C-2	Regulation of Heart rate –Tachycardia and Bradycardia
			C-3	Importance Hormone action and concept of Secondary messengers
			C-4	Functioning of Carbohydrates and Classification
			C-5	Significance of Protein and lipid Metabolism in Animals
14	**Zoo** **DSE I(B)**	**Entomology**	C-1	Definition, scope and importance of Entomology.
			C-2	To create awareness about of Vectors and the public health importance
			C-3	Helps to prevent Vector-borne diseases-(Malaria, Dengue, Filaria)

			C-4	Students from agricultural background are benefited -Crop Pests and their control measures
			C-5	Create occupation in Apiculture and Sericulture
15	**Zoo** **DSE II**	**Immunology and Animal Biotechnology**	C-1	To know more about Immunity of ones own self
			C-2	Working of Immune system in health and diseases
			C-3	Importance of Vaccination in Infants and Adults
			C-4	Concept and Scope of Animal Biotechnology
			C-5	Importance of Transgenic animals and its Application
16	**Zoo** **DSEII(A)**	**Aquatic Biology**	C-1	Brief introduction of the aquatic biomes
			C-2	To learn the environment and Fauna of Freshwater, Estuaries and Oceanic ecosystem
			C-3	To observe Nutrient cycles of lakes.
			C-4	Process of Eutrophication and disadvantages.
			C-5	Sewage treatment and water quality assessment in daily life
Chemical Sciences				
1	**BS 106**	**Paper-1**	CO1	Appreciate the chemical properties and periodic trends of P- block elements.
			C02	To understand the principles of qualitative analysis.

			CO3	Understanding electronic effect in organic molecules leading to polarization effect ,inductive effect ,effect on nature of organic compound and hyper conjugation.
			CO4	Learning synthesis and properties of alkanes alkenes and alkynes
			CO5	Atomic structure and elementary Quantum mechanics of atom.
			C06	To learn the chemical bonding &skills to draw MOEDs of molecules like H2,O2,N2 etc. Laws of Crystallography
2	**BS 206**	**Paper-2**	CO1	Learning various oxides ,oxyacids,polyhalides, psedohalogens of P- block elements
			CO2	Understanding reasons behind the inertness ofzero group elements and their properties
			CO3	Study of D-block elements leading to their different characteristic properties like color magnetic properties etc.,
			CO4	Aromaricity based on HUCKEL'S rule and chemical properties of Benzene based on ring activating and deactivating groups Organic &halogen compounds– synthesis and Mechanism of substitution reaction by $SN^1$and SN^2
			CO5	To understand Liquid-liquid mixtures Raoults and Henryslaws, colligative properties of dilute solutions ,laws of osmotic pressure, laws of Crystallography, Braggs law and its application
3	**BS 306**	**Paper-3**	CO1	Learning the justification for the position of f-block elements and the periodic properties of lanthanides and actinides

			C02	Learning symmetry operations of molecules by relating to the symmetry in the nature
			C03	To learn preparation and properties of Alcohols, Phonols & Ethers. Carbonyl compound – to learn how the C = O participate in various characteristic reactions , differentiating reactions of Aldehydes and Ketones
			C04	Learning the Gibbs Phase rule and Phase diagrams of one component and two component system and the concept of freezing mixtures.
			C05	To learn classification of colloids & their preparations.properties of colloids.types of emulsions,Gels.Types of Adsorption & Langmuir theory. applications of colloids
			C06	To understand the properties, synthesis and applications of nano materials
			C07	To Identify symmetry in molecules and to learn stereoisomerism and its types , identify chirality in molecules, assign R&S , cis & trans and E,Z configurations to molecules.to learn confirmations of certain organic molecules to understand the concept of stability
4	**BS 401**	**SEC-2**		To learn remedial methods for pollution, causatives and preventive measures for depletion of ozone layer, global warming, acid rains and protection measures to be taken in the usage of cell phones. Methods for controlling water

				pollution. To gain knowledge of the act available for protection from different kinds of pollution
5	**BS 406**	**Paper-4**	C01	To learn bonding concept in coordination compounds in terms of Werners, Sidgwick and valence bond theories, Geometries and isomerism of coordination compounds.
			C02	To learn nomenclature & methods of preparation of carboxylic acids. Nitro hydrocarbons and characteristic properties.
			CO3	To learn nomenclatures and classification of organo metallic compounds.
			C04	Concept of conductance in electrolyte and application of theories of Arrhenius Ostwald's dilution law and Debye -Huckel Onsagar for weak and strong electrolytes.reversible and irreversible cells.standard hydrogen electrode its importance. Numerical problems.
			C05	Learning concerted reactions,concept of HOMO, LUMO. Types of pericyclic reactions. Learning various synthetic strategies, Retro synthetic analysis. Classification of stereo selective reactions.
6	**BS 501**	**SEC-3**		To learn classification of materials-polymers, ceramics, cement. Learning of manufacture of White ware, Glass, types of glasses, Polymers and unsaturated Hydro carbons. Learning about different types Ferrous mixed Metals.
7	**BS 505**	**Paper-5**	C01	Learning the bond nature of metal complexes based on CFT and to calculate magnetic moments and color

				of the complexes. applications complexes in Industry, qualitative analysis and quantitative analysis. structures of Boranes and Carboranes &application of Wades rule
			C02	Classify amines &general methods of preparation, properties and uses of amines and nitro compounds cyanides and isocyanides. Learn nomenclature of five member rings and their reactivity and synthesis. significance of heterocyclic rings in bio systems.
			CO3	interaction of matter with electro magnetic radiation which leading to Molecular spectra lik e Micro wave spectra ,Ir, Electronic spectra and their principles
			C04	To learn rates of reaction ,rate constants and problems solving in determining order of a reaction.
			C05	Learning the bond nature of metal complexes based on CFT and to calculate magnetic moments and color of the complexes.applications complexes in Industry,qualitative analysis and quantitative analysis. structures of Boranes and Carboranes &application of Wades rule
8	**BS 508**	**Paper-6**	C01	To understand the principles and methods of solvent extraction.
			C02	To learn the principles of TLC & Paper chromatography, Ion exchange chromatography and Gas chromatography
			CO3	Colorimetry-Learning the general features of absorption, trasmittance.Learning single beam & Double beam spectrophotometers verification of Beers law.

9	**BS 605**	**Paper-7**	CO1	Thermodynamic and kinetic stability of complexes based on VBT&CFT theories
			C02	Learning the biological significance of metals and their role in Chlorophyll and Haemoglobin
			C03	Learning straight chain and cyclic structure of Glucose with evidences. Protiens basic structure and their essentiality in various biological activities in human beings.
			C04	To learn Thermodynamic properties &laws of Thermodynamics and ability to Solve problems using relationships between work, enthalpy entropy and free energy.
			C05	Demonstrate an understanding the processes responsible for NMR, chemical shifts and splitting patterns in determining the structure of organic molecules with the help of protons arrangement around the carbon atoms. Determination of molecular formula with the mass spectrometry
			C06	Interaction of matter with light leading to physical,chemical changes.Laws of photochemistry, learning Jablonsky diagram
10	**BS 608A**	**Paper-8**	C01	To Learn types of diseases and the terms drug,Pharmacology,pharamacophore and etc.
			C02	To learn Mechanism of working of the Enzymes.Drug action-receptor theory,
			C03	To learn synthesis and therapeutic activity of chemotherapeutics like Sulphanilamide,Pencillin-G & drugs acing on metabolic disorders,nervous system and etc.introductionof sources

				for vitamin deficiency and micronutrients
B.Sc (Computer Sciences/Physical Sciences/Mathematical Sciences) : Course Outcomes				
S.No	**Course Code**	**Course Title**		**Course Objectives and Out Comes**
Computer Science				
1	**BS-106**	**Programming in C**	C-1	Understanding Computer Fundamentals
			C-2	Understanding homogeneous storage stuctures
			C-3	To learn the implementations of mathematical theory of functions through C programming**.**
			C-4	Working with User Defined Data Types like Structures, Unions. Also includes the concepts of external file handling through C programming.
2	**BS-206**	**Programming in C++**	C-1	Understanding Object Oriented Paradigm
			C-2	Working with Constructors, Static nature of Classes.
			C-3	To deal with Inheritance and its polymorphism
			C-4	Working with exceptions handling and template programming.
3	**BS-301 A**	**Sci-Lab - 1**	C-1	Learning the Sci-Lab environment
			C-2	Working with Scalars, Vectors and Matrices.

4	**BS-301 B**	**Boolean Algebra**	C-1	Working with Number Systems
			C-2	Understanding Boolean Equations
5	**BS-306**	**Data Structures**	C-1	Learning Fundamental Data Structures
			C-2	Working with Recursion, Traversing and Lists
			C-3	Working with Heterogeneous data structures
			C-4	Implementing searching and sorting
6	**BS-401 A**	**Sci-Lab -2**	C-1	Learning Control Statements and Scripts
			C-2	Understanding String Handling, Graphics and Statistical operations
7	**BS-401 B**	**Digital Logic**	C-1	Learning Karnaugh Maps and Logic Gates
			C-2	Designing Circuits
8	**BS-406**	**Database Management System**	C-1	Understanding Relational Algebra
			C-2	Practically learning SQL
			C-3	Designing databases using ER models
			C-4	Understanding advance concepts of DBMS
9	**BS-501**	**Information Technologies - I**	C-1	Understanding Computer Fundamentals, Memory units, IO Devices
			C-2	Understanding System Softwares
10	**BS-502 A**	**Python Programming - I**	C-1	The Need to learn Python and Its Datatypes
			C-2	Leaning control structures of Python

11	**BS-502 B**	**Computer Organization**	C-1	Designing basic memory units like Registers, Flipflops
			C-2	Designing Circuits, Adders, Multiplexer
12	**BS-505**	**Programming Java**	C-1	Leaning Control Structures, Data types and Inheritance
			C-2	Working with Packages or libraries, IO operations
			C-3	Learning Advanced Java Graphical objects
13	**BS-506 (1E)**	**Operating Systems**	C-1	Understanding Process Management
			C-2	Understanding Deadlock Management
			C-3	Understanding Memory Management
14	**BS-506 (2E)**	**Software Engineering**	C-1	Student can learn the process of preparing Software Requirements Gathering
			C-2	Understanding Software Design and Architecture
			C-3	Practicing Computation of Metrics and Software Testing
15	**BS-601**	**Information Technologies - II**	C-1	Learning Storage Structures
			C-2	Understanding Network Topologies and the Internet
16	**BS-602 A**	**Python Programming - II**	C-1	Learning Arrays, Matrices, Strings
			C-2	Implementation of Objects like lists, dictionaries, and their basic operations
17	**BS-602 B**	**Information Security**	C-1	Understanding Electronic Payment Systems

			C-2	Understanding Intellectual Property Rights
18	**BS-605**	**Computer Networks**	C-1	Working with Satellite Communication, Multiplexing and Transmission Media.
			C-2	Understanding Error Correction and Detection
			C-3	Networking and Understanding the upper OSI layers
19	**BS-606 (1F)**	**PHP with MySql**	C-1	Learning Control Structures
			C-2	Understanding functions and objects
			C-3	Working with Files and Dictionaries
19	**BS-606 (2F)**	**Web Technologies**	C-1	Working with Forms, Tables and Frames
			C-2	Understanding Style Sheets
			C-3	Learning JavaScript and Working with Libraries
Physical Sciences				
1		**Mechanics**		On successful completion of the course students will: • Application of Vector theorems of Mechanics and interpretation of the results • Study of motion of macroscopic objects under the influence of system of forces • Understand collisions in one, two and three dimensions and relation between scattering cross-section and impact parameter. • Know how to apply Newton's

				laws, conservation laws to rigid body dynamics and study Euler equations. • Gain knowledge of Central forces, conservative nature and equation of motion. Derive Kepler's laws of planetory motion and study motion of Satellites. • Understand properties of materials. • Introduction to analytical mechanics as a system tool for problem solving • Study of Special theory of Relativity-postulates, Inertial and non-inertial reference frames and concept of four-vector formalism
2		**Waves and Oscillations**		On successful completion of the course students will: • Understand basic concepts for a mathematical description of waves and oscillations and to provide expertise for solving the differential equations of simple, damped and forced harmonic oscillators. • Use Lissajous figures to understand different combinations of Simple harmonic vibrations. • Understand Transverse wave propagation along a stretched string, general solution-boundary conditions and Energy transport. • Solve wave equation for longitudinal vibration in bars

				and study special cases with different boundary conditions. • Gain knowledge on application of transverse and longitudinal waves
3		**Thermodynamics**		On successful completion of the course students will: • Gain knowledge of particle-particle collisions in Kinetic theory of gases and derivation of Maxwell's Speed distribution law. • Understand the Transport phenomenon of gases. • Become familiar with various thermodynamic processes and have a clear understanding of reversible and irreversible processes. • Have a clear idea of concept of Entropy and the changes in entropy for various thermodynamic processes. • Know about Thermodynamic potentials and arrive at Maxwell's Thermodynamic relations and applications. • Knowledge of Cryogenics • Become familiar about the concept of Quantum theory of radiation- Energy distributions laws. • Understand elementary concepts of statistics and statistical distribution of system of particles.
4		**Optics**		On successful completion of the course students will:

				• Gain knowledge on various theories of light and introduction to a range of light sources including Lasers. • Acquire skills to identify and apply formulae of Optics and Wave Physics and emphasis on image forming systems. • Understand the properties of light like reflection, refraction, interference, diffraction, polarization. • Understand the applications of Interference in design and working of interferometers. • Get acquainted with types of diffraction and Polarization. • Understand the resolving power of different optical instruments. • Gain knowledge on working of Holography and their applications. • Gain knowledge about basics of Modern optics like Fibre optics and their applications in communications.
5		**Electromagnetism**		On successful completion of the course students will: • Acquire knowledge on basic concepts of Electric and Magnetic fields. • Realize the importance of applications of Gauss's law, Biot-Savort law, Faraday's laws, Ampere's law and Maxwell's electromagnetic equations.

				• Have gained elaborated knowledge of Electro-magnetic induction. • Elaborative knowledge about Polarization of Electromagnetic waves
6		**Solid State Physics**		On successful completion of the course students will: • Understand the basics of Crystal structures, X-ray diffraction and Elementary Lattice Dynamics. • Have a clear knowledge of Super-conductivity, underlying principles and latest applications and on-going research works. • Become familiar with magnetic properties of matter with related theories and Dielectric properties of materials. • Have a clear picture of elementary band theory of solids and Hall Effect. • Gain basic knowledge of Laser and working of different types of Lasers.
7		**Modern Physics**		On successful completion of the course students will: • Thorough knowledge about Atomic spectra and inadequacy of Classical theories. • Acquire intuitive ideas of Elementary Quantum mechanics and ability to apply for solving complex phenomenon. • Clear picture of nuclear

				compositions and various nuclear models. • Deep knowledge about nuclear fission and fusion, Radio-activity and the relevance of nuclear transformation. • Understand the working of nuclear reactors, classification of Elementary particles.
8		**Basic Electronics**		On successful completion of the course students will: • Understand basic concepts of Network models and theorems and the concept of two-port network with Z,Y,h & ABCD parameters. • Solve complex problems involving linear electrical networks employing the symmetry concepts together with various network theorems. • Basic knowledge of Energy band theory and formation of P-N Junction. • Understand the characteristics of PN Junction diode and Zener diode and their applications. • Extended knowledge about types of Transistors along with different configurations and applications. • Knowledge of the Concept of feed-back and Oscillators. • Familiar about different types of Number systems – Conversions and Binary Arithmetic application to digital study.

				• Gain knowledge about different Logic gates and performing De-Morganization of Boolean expressions.
Mathematics				
1		**Differential Calculus**		By the time students completes the course they realize wide ranging applications of the subject and Students will be able to 1. understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus. 2. locate the x and y intercepts, any undefined points, and any asymptotes. 3. determine asymptotes for rational expressions (we will not go into the graphs in detail) 4. apply the techniques from the previous section to graph a fourth degree polynomial or higher 5. determine if there is any symmetry to aid in the graphing process. 6. determine the point(s) of intersection of pairs of curves.
2		**Differential Equations**		1. Student will be able to solve first order differential equations utilizing the standard

				techniques for variable separable, exact, linear, homogeneous, or Bernoulli cases. 2. Student will be able to find the complete solution of a nonhomogeneous differential equation as a linear combination of the complementary function and a particular solution. 3. Student will be introduced to the complete solution of a nonhomogeneous differential equation with constant coefficients by the method of undetermined coefficients. 4. Student will be able to find the complete solution of a differential equation with constant coefficients by variation of parameters. 5. Student will have a working knowledge of basic application problems described by second order linear differential equations with constant coefficients
3		**Real Analysis**		1) describe fundamental properties of the real numbers that lead to the formal development of real analysis. 2) demonstrate an understanding of limits and how they are used in sequences, series, differentiation and integration.

				3) Determine if an infinite sequence is bounded. 4) Determine if an infinite sequence is monotonic. 5) Determine if an infinite sequence is convergent or divergent. 6) Find the sequence of partial sums of an infinite series. 7) Determine if a geometric series is convergent or divergent. 8) Find the sum of a convergent geometric series. 9) Determine if an infinite series is convergent or divergent by selecting the appropriate test from the following: (a) test for divergence; (b) integral test; (c) p-series test; (d) the comparison tests; (e) alternating series test; (f) absolute convergence test; (g) ratio test; and (h) root test. 10) Determine if an infinite series converges absolutely or conditionally.
4		**Algebra**		1. Understand the importance of algebraic properties with regard to working within various number systems. 2. Extend group structure to finite permutation groups (Cayley's Theorem). 3. Understand Sylow's Theorems.

				4. Generate groups given specific conditions. 5. Investigate symmetry using group theory. 6. Understand the three major concrete models of Boolean algebra: the algebra of sets, the algebra of electrical circuits, and the algebra of logic.
5		**Linear Algebra**		1. Identify and construct linear transformations of a matrix. 2. Characterize linear transformations as onto, one-to-one. 3. Solve linear systems represented as linear transforms. 4. Express linear transforms in other forms, such as matrix equations, and vector equations. 5. Characterize a set of vectors and linear systems using the concept of linear independence. 6. Recognize the concepts of the terms span, linear independence, basis, and dimension, and apply these concepts to various vector spaces and subspaces. 7. Compute and use determinants, eigenvectors and eigenvalues, orthogonality 8. Use technological tools such as computer algebra systems or graphing calculators for

				Visualization and calculation of linear algebra concepts.
6		**Solid Geometry**		1. Learn sketching of various curves. 2. Learn Concepts of Asymptotes and various types of Asymptotes • Understand the application of Cycloid. 3. Learn to find parametric equations of curves. 4. Understand polar coordinates and its relationship with cartesian coordinates. 5. Understand symmetry of various curves in polar coordinate system. 6. Learn polar equations of straight lines and conics. 7. Apply the concept of reciprocal curves. 8. Find centre and radius of Sphere and circles 9. Find family of spheres Passing through a circle, tangent planes and normal lines to a sphere. 10. Identify different conicoids and sketch them 11. Understand relationship between different coordinate systems and plot the curve in Spherical, cylindrical polar coordinates. 12. Understand Jacobian and its importance in Mathematics. 13. Obtain equation of Cone, enveloping cone ,cylinder ,right

				circular cylinder , enveloping cylinder and prove their results . 14. Find equation of tangent plane, reciprocal cone of given cone .
7		**Integral Calculus**		1. Evaluate the volumes of solids using cross sections 2. Calculate the length of an arc of a curve when whose equations are given in parametric and polar form 3. Evaluate the area of surfaces of revolution 4. Determine the area and volume by applying the techniques of double and triple integrals
8		**Numerical Analysis**		1. Learn various numerical methods to solve algebraic and transcendental equations. 2. Understands forward, backward and central differences and relationships between them. 3. Learns interpolation with equally spaced points and applies various interpolation formulas to interpolate a given data. 4. Learns interpolation with unequally spaced points and applies various interpolation formulas to interpolate a given data. 5. Learns divided difference and its properties and uses Newton's formula to for interpolation.

				6. Learns numerical differentiation and able to use various numerical methods to find differentiation. 7. Understands various methods of numerical integration. 8. Able to solve ordinary differential equation using various numerical methods
9		**Complex Analysis**		1. Determine whether a given function is differentiable, and if so find its derivative. 2. Use power series and line integrals to construct differentiable functions. 3. Construct branches of inverse functions. 4. Find parameterizations of curves, and compute line integrals directly. 5. Use anti-derivatives or Cauchy's integral theorem or formula to compute line integrals. 6. Determine whether given functions have anti-derivatives, logarithms, and nth roots. 7. Find Laurent series about isolated singularities, and determine residues. 8. Use the residue theorem to compute several kinds of real integrals. 9. Construct conformal mappings between many kinds of domain.

				10. Use conformal mapping to solve the Dirichlet problem in a region. 11. Determine whether a sequence of analytic functions converges uniformly on compact sets. 12. Express some functions as infinite series or products.
10		**Vector Calculus**		1.Memorize definition of directional derivative and gradient and illustrate geometric meanings with the aid of sketches. 2. Memorize theorem relating directional derivative to gradient and reproduce proof. 3. Calculate directional derivatives and gradients. 4. Apply gradient to solve problems involving normal vectors to level surfaces. 5. Explain the concept of a vector integration a plane and in space.

B.Com. Course Outcome				
1.	**BCO104**	Financial Accounting - I	CO1	Students can understand and ascertain: Meaning of Accounting - its objectives, scope, advantages, disadvantages and its principles.
			CO2	The Accounting Process – Identifying the types of accounts, Recording (journal) and Posting (ledger). And understanding the contemporary issues in Accounting.
			CO3	The Different types of books (purchase book, sales book, cash book etc.). Bank Reconciliation Statement its Meaning, Need and Ascertainment of correct cash book balance.
			CO4	Meaning of Trial balance and its objectives. Rectification of Errors before and after preparation of Final Accounts.
			CO5	Preparation of Manufacturing , Trading, Profit and loss Account and Balance Sheet along with adjustments and Closing Entries
2.	**BCO 105**	Business Economics	CO1	Students can understand: Nature and Role of Business Economics, Theory of Consumer Behavior.
			CO2	Demand analysis - Law, types and measurement
			CO3	Supply analysis - Law , types and measurement.
			CO4	Production analysis- concepts, Law of variable proportion - Law of return to scale – isocost – isoquants
			CO5	Cost and break even analysis
3.	**BCO 106**	Business Organization	CO1	Students can understand: Scope, Functions, Role of Business in Social Development - Essentials for Modern Business.
			CO2	Forms of business organization.

			CO3	Procedural and legal aspects of joint stock company and Management of cooperative societies
			CO4	Forms and objectives of public and private enterprises
			CO5	Social Responsibilities of business – levels of corporate social responsibility
4.	**BCO 107**	Information Technology	CO1	To imbibe applications of IT in the areas of business:
			CO2	Types of Operating System, Booting Process
			CO3	Word processing- creating, editing, saving, printing
			CO4	Worksheet to analyze data with graphs & Charts, Advanced tools to compute data value and application of MS-Access
			CO5	Creating Audio-Visual presentations, Running Slide show, Browsing Services available on internet and Application of Multimedia and E- commerce
5.	**BCO204**	Financial Accounting - II	CO1	Students can understand and ascertain: Depreciation - its objectives, factors and methods.
			CO2	Single Entry System - Features and methods.
			CO3	Accounting Process of Non- profit Entities.
			CO4	Documentation and Accounting treatment for admission ,retirement and death of partner in a partnership firm.
			CO5	Accounting treatment for Dissolution of firm and Insolvency of partner.
6.	**BCO205**	Managerial Economics	CO1	To enable students to understand conceptual and practical knowledge of managerial economics:
			CO2	Managerial theories of the firm
			CO3	Market Analysis- profit maximizing output in the short and long run.
			CO4	Pricing Methods and theories of profit
			CO5	Computation of National Income, Phases of Business cycle.
7.	**BCO206**	Principles Of Management	CO1	To familiarize the students with: Basic principles and trends of management.
			CO2	Theories of management
			CO3	Process of planning, organizing and staffing.

			CO4	Techniques of Directing, Effective communication, Importance and Theories of Motivation
			CO5	Guidelines for making delegation effective, Principles of Co-ordination, controlling techniques.
8.	**BCO207**	Relational Database Managemen t Systems	CO1	Students can learn to design and develop Database System:
			CO2	Relational Database Integrity , Sequential File Organization
			CO3	writing good queries using a standard query language called SQL
			CO4	Concurrency Management, Database Recovery and Security.
			CO5	Structure of Distributed Database system , Emergence of Client Server Architecture.
9.	**BCO304**	Advanced Accounting	CO1	Students will be able to do Accounting Treatment in the books of Hire Purchaser and Hire Vendor – They can know the difference between Hire Purchase and Installment Purchase system.
			CO2	Understand and prepare Branch and Department Accounts
			CO3	Understand Journal entries and accounting treatment with respect to Share Capital-Issue , Forfeiture of Shares and Debentures
			CO4	Understand the Accounting Standards - Adoption of International Financial Reporting Standards(IFRS)
			CO5	Compute the value of Goodwill and Shares
10.	**BCO305**	Income Tax - I	CO1	Students will understand Income Tax Act 1961- Tax Structure in India Capital & Revenue Receipts – Expenditure & losses.
			CO2	Computation of Total Income of an Individual based on Residential Status&Incidence of Tax. Concepts on classification of Agricultural and Nonagricultural Income

			CO3	Concepts of Salary Income- Basic Salary - Deductions from Gross Salary u/s 16 - and can compute Income from Salary
			CO4	Types of House Properties – Scope of Chargeability (chargeable of not chargeable)
			CO5	Conditions for charge of depreciation – Computation of Income from Business & Profession
11.	**BCO306**	Business Statistics	CO1	Students can understand and ascertain: Importance and Scope of Statistics, Sampling methods and Tabulation of data
			CO2	Diagrammatic and graphic presentation
			CO3	Mean , Median and Mode
			CO4	Measures of Dispersion - Quartile Deviation, Mean Deviation and Coefficients, Standard Deviation,Co-efficient of Variation
			CO5	Types, Methods of Constructing Index Numbers and Tests of Consistency of Index Number
12.	**BCC307**	Programming With C	CO1	Students can understand C Language, Data Types And I/O Operations
			CO2	Operators, Expressions and Decision Making – Looping - Introduction - If statements - If-else / Switch/Conditional/While /Do /For Statements
			CO3	Arrays and Strings - Initializing an array - One / Two dimensional array - Dynamic array. Strings
			CO4	Built–in functions: Mathematical functions - User defined functions: Elements of Functions
			CO5	Structures and Pointers - Enumerated Data types - Introduction to Unions. Pointers - Understanding pointers
13.	**BCO404**	Corporate Accounting	CO1	Students can understand Journalise the entries w.r.t. Issue of Bonus Share, Compute Profit Prior to Incorporation and Acquisition of Business

			CO2	Calculate purchase consideration and can record the entries in case of Amalgamation in the books of transferor and transferee and can Prepare finanal statement of Internal Reconstruction
			CO3	Prepare Statement of affairs and deficiency a/c as per list H - Liquidator's Final Statement of Account- Liquidator's Remuneration
			CO4	Prepare accounts of Life Insurance Business-
			CO5	Prepare profit and loss account and final accounts of Banks using various schedules
14.	**BCO405**	Income Tax II	CO1	Students can understand Procedure for computation of Long-term and Short-term Capital Gains/Losses –
			CO2	To Compute on Income from Other Sources
			CO3	To the Computation of Total Income with all heads of Income & Tax liability
			CO4	The Assessment Procedure - Income tax returns – Filling of e-return – Rectification of mistake – Time limit for Completion.
			CO5	Income Tax Officers , Assessing Officer & powers – Functions - Commissioner of Income tax – Powers -– Functions – Appeals – Revisions – Review
15.	**BCO406**	Business Statistics II	CO1	Students can analyze and compute: Correlation- types and methods.
			CO2	Regression Analysis- Lines, Equations
			CO3	Time Series Analysis – Components and measurement.
			CO4	Theorems of Probability and Approaches to Probability
			CO5	Forms and importance of Theoretical distributions

16.	**BC0407**	Object Oriented Programming with C ++	CO1	Students can understand Object Oriented Programming, Creation of new Data Types, Giving importance to Class, Inheritance, Encapsulation, Abstraction, Polymorphism, Operator Overloading, Function Overloading, Function Defining, Software Reusability.
			CO2	Versus C++ Comparison between C and C++ – Data Types: Integer Data Types . Char. Unsigned Char, Short, Unsigned Short, Int, Unsigned Int, Long, Unsigned Long. Floating Data Types . Input Statement (or) Input Function - Cin>> –
			CO3	Introduction to Arrays - Declaration of Arrays - Different Types of Arrays
			CO4	Programming Constructs, Unary Operators - Increment Operator (++), Prefix Notation, Postfix Notation, Decrement Operator (--). Conditional Constructs - Switch .Case Construct, Break Statement, Default Keyword, and Conditional Operator. Loop Construct - While Loop, Do. While Loop, For loop. Examples on Programming Constructs
			CO5	Important Features of C++, Classes - Objects – Structure – Pointers - Enumerated Data Types – Constructors - Destructors
17.	**BCO503**	Cost Accounting	CO1	Students can understand Understand cost Accounting concepts, systems, classification and preparation of cost sheet.
			CO2	Essential of stores, control of purchase dept. records, pricing methods.
			CO3	Understand essentials of stores, machine turnovers, time keeping, book keeping, over time, and idle time
			CO4	Understand the Methods of Costing, and process of profits

			CO5	Understand the need of Reconciliation of Costing and Financial Accounts, reasons for disagreement in profit
18.	**BCO504**	Business Law	CO1	Students can understand Students can understand contracts, what is offer, acceptance, agreement, consent, flaw in consent and consideration.
			CO2	Discharge of a Contract, illegalities and immoral agreements, breach and remedies for breach of contract
			CO3	Sale, agreement to sell, goods, rights of an unpaid seller, conditions, warranties, auction sale
			CO4	Consumer Protection Act, 1986, Rights of consumers, unfair trade practices, redressal, and penalties for violation.
			CO5	Intellectual Property Rights, Information Technology Act-2000, aims objectives, cyber crimes and punishments for offenders
19.	**BCO505**	Banking Theory & Practice	CO1	Student can understand Origin /Growth , Functions Of Commercial Banks and Reserve Bank of India – Functions - Performance Appraisal of various regional and development banks.
			CO2	Relationship between Banker and Customer - Openings of Accounts etc.
			CO3	Negotiable Instruments and their Special Features
			CO4	Precautions to be taken by a Paying Banker-. Principles of sound lending, Credit worthiness of
				borrowers, Non-Performing Assets, Modes of creating charge.
			CO5	Emerging Trends in Commercial Banking in India. Basel norms and its global impact with special emphasis on its implementations in India
20.	**BCO506**	Computerized Accounting	CO1	Students can understand Features of Accounting packages- Creation: Company – Groups – Ledgers, Predefined vouchers - Displaying - Altering – Deleting- Bank Reconciliation Statement- financial statements.
			CO2	Creation of company – Creation of Groups- Creating purchase order & Sales order –

				Invoicing - Display of inventory reports & statements
			CO3	Preparation of Final Accounts: Nonprofit organizations - Partnership firms - Corporate companies - Bank Accounts
			CO4	Preparation of: Stores Legers – Job costing - Common size statements - Funds Flow Statements - Cash Flow Statements. Ratio Analysis
			CO5	Tax application - Introduction to VAT - VAT activation and classification - VAT computation - Composite VAT - Input VAT on capital goods
21.	**BCO503**	Auditing		Students can understand Introduction to Auditing, Evolution, objectives, Importance, Types of Audit.
				Planning of Audit and Control, Auditors, appointment, Qualifications and disqualifications, Qualities, Remuneration, Removal, Rights,
				Duties , Liabilities. Audit planning
				Internal Control, Internal Check & Internal Audit: Essential Characteristics, Objectives of Audit
				Meaning of Vouching, Investigation, verification, valuation of financial statements
22.	**BCO508**	Web Technologies	CO1	Students can understand HTML Programming-Formatting, Text-Forms-Graphics in HTML Creating Tables & Frames- Web Design Principles.
			CO2	VB Scrip- User Interaction, Data Validation in VB Script - Handling Runtime Errors
			CO3	Dynamic HTML Programming- Changing Text and Attributes- Creating Multimedia Effects with Filters and Transactions
			CO4	Active Server Pages (ASP)- ASP Objects - Data Access Technology - ASP Application - Information Search Tools.
			CO5	Extensible Markup Language (XML)-- Creating XML Documents, Style Sheets- XML Document Object Model - XML Query Language.

22.	**BCO603**	Managerial Accounting	CO1	Students can understand: Managerial Accounting- Objectives – Scope – Functions — Relationship between Cost, Management and Financial Accounting.
			CO2	Marginal Cost Equation Techniques- Application of Marginal Costing – CVP Analysis – Break-Even Analysis: - Calculation of BEP.
			CO3	Make or Buy Decisions Add or Drop products- Special Order pricing- Replace or Retain
			CO4	Essentials of Budgets and Budgetary Control- Classification of Budgets (Problems on Flexible and Cash Budgets).
			CO5	Classification – Importance – Objectives – Methods of forecast/ Estimation ofWorking Capital Requirements- Management of Current Assets.
24..	**BCO604**	Compan y Law	CO1	Students can understand Characteristics of a company- types of companies- promoters and their legal position- provisional contracts; on-line registration of a company.
			CO2	basic documents- allotment and forfeiture of share, calls on shares issue of sweat capital-transfer and transmission of shares, D-Mat system
			CO3	Managers- powers & duties – various audit committee- prohibition of insider trading
			CO4	Company Meetings- Company Meetings- requisites of a valid meeting-meeting through video conferencing, e-voting
			CO5	Dividends and Audit-various Provisions - rotation of auditors -secretarial standards-on- line filing of documents.
25.	**BCO605**	Financial Institution s And Markets	CO1	Students Can Understand Functions of Financial System – Constituents Of Indian Financial System
			CO2	The Role and Functions of All India Development Banks
			CO3	The Role Of State Finance Corporations (SFCs)

				- Industrial Development Corporations (SIDCs)
			CO4	Financial Markets - Structure Of Indian Money Market – Recent Development In The Indian Money Market
			CO5	Capital Market - Secondary Market - SEBI – Powers And Functions
26.	**BCO607**	Advanced Corporate Accounting	CO1	Students can understand Nature – Legal requirements – Capital and Revenue Profit/Reserves/Losses- Cost of Control or Goodwill- Inter Company Transactions- Revaluation of Assets Consolidated Balance Sheet
			CO2	Meaning of Double Account System-- Calculation of Reasonable Return and Disposal of Surplus – Replacement of an Asset
			CO3	Methods of Inflation Accounting: Current Purchasing Power Method (CPP) – Current Cost Accounting (CCA).
			CO4	Advantages and Disadvantages – Types: Financial and Operating Lease – Accounting Treatment in the books of both the parties
			CO5	Assumptions – Advantages and Limitations – Approaches - Human resource accounting in India
27	**BCO508**	Excel foundation	CO1	INTRODUCTING EXCEL: Workbooks and Worksheets, Moving Around a Worksheet, Ribbon tabs, Types of commands on the Ribbon.
			CO2	WORKSHEET OPERATIONS: Moving and resizing windows, Switching among windows, Activating a worksheet, Adding, Deleting a worksheet, Changing a sheet tab color, Rearranging your worksheets.
			CO3	TABLES AND FORMATTING: Creating a Table, Changing the Look of a Table, Navigating in a Table, Selecting parts of a Table, Adding, Deleting new rows or columns,

			CO4	EXCEL FILES & TEMPLATES: Creating a New Workbook, Filtering filenames, Saving and Auto Recovery, Password-Protecting a Workbook, Recovering unsaved work,
			CO5	PRINTING YOUR WORK: Normal, Page Layout, Page Break View, Choosing your printer, Specifying what you want to print, Changing Page Orientation.
28	**BCO607**	E-Commerce	CO1	E-Commerce: Meaning - Advantages & Limitations - E-Business: Traditional & Contemporary Model, Impact of E-Commerce on Business Models
			CO2	Framework of E-Commerce: Application Services - Interface Layers - Secure Messaging - Middleware Services and Network
			CO3	CONSUMER ORIENTED E-COMMERCE APPLICATIONS: Introduction - Mercantile Process Model: Consumers Perspective and Merchant's Perspective
			CO4	ELECTRONIC DATA INTERCHANGE: Introduction - EDI Standards - Types of EDI - EDI Applications in Business
			CO5	E-MARKETING TECHNIQUES: Introduction - New Age of Information - Based Marketing - Influence on Marketing - Search Engines & Directory Services - Charting the On- Line Marketing Process
29	**BCO608**	MIS	CO1	AN OVERVIEW OF MANAGEMENT INFORMATION SYSTEMS (MIS): Concept & Definition of MIS - MIS Vs. Data Processing - MIS & Decision Support Systems -
			CO2	FOUNDATION OF INFORMATION SYSTEMS: Introduction to Information System in Business - Fundamentals of Information Systems - Solving Business Problems with Information Systems

			CO3	CONCEPT OF PLANNING & CONTROL: Concept of Organizational Planning - Planning Process - Computational Support for Planning - Characteristics of Control Process - Nature of Control in an Organization.
			CO4	BUSINESS APPLICATIONS OF INFORMATION TECHNOLOGY: Internet & Electronic Commerce – Intranet - Extranet & Enterprise Solutions
			CO5	ADVANCED CONCEPTS IN INFORMATION SYSTEMS: Enterprise Resource Planning - Supply Chain Management - Customer Relationship
30	**BCO606**	Commerce Lab	CO1	BASIC BUSINESS DOCUMENTS: Trade license under Shops and Establishments Act - Labor license from Department of labor - Partnership Deed - Pollution, Health licenses
			CO2	FINANCE, BANKING AND INSURANCE DOCUMENTS: Promissory Note - Bill of exchange – Cheque - Pay in slip
				- Withdrawal form - Account opening
			CO3	DOCUMENTS FOR INCORPORATION A COMPANY: Memorandum of Association - Articles of Association - Certificate of Incorporation – Prospectus
			CO4	DOCUMENTS OF TAXATION: PAN application under Income Tax Act - TAN application under Income Tax Act - Form:16 to be issued by Employer - TDS and its certificate u/s15 - Income Tax payment challans

			CO5	BUSINESS CHARTS: Elements of business - Forms of business organizations - Procedure of incorporation of companies - Classification of partners with salient features of each of them
31	**BCO501**	PRACTICE OF GENERAL INSURANCE	CO1	GENERAL INSURANCE POLICIES: Introduction to General Insurance-Origin of general insurance— Classification of General Insurance Companies
			CO2	UNDERWRITING, PREMIUMS, CLAIMS AND INSURANCE RESERVES AND ACCOUNTING: Concept of Underwriting—Underwriting Process—Risk sharing and its methods
32	**BCO502**	INTRODUCTION TO INDIAN ECONOMY	CO1	STRUCTURE OF THE INDIAN ECONOMY: Indian Economy-Characteristics-Developmental issues- Structural changes in the Indian Economy-Human Development-concept and measures-Occupational distribution and economic
			CO2	POLICY ASPECTS OF INDIAN ECONOMY: Liberalization - Privatization-Globalization-Poverty-Unemployment
33	**BCO601**	REGULATIONS OF INSURANCE BUSINESS	CO1	INSURANCE LEGISLATION IN INDIA: History of life and non-life insurance legislation—nationalization— insurance reforms— insurance business Act, 1972—IRDA and its functions including licensing functions
			CO2	POLICY HOLDERS RIGHTS OF ASSAINGMENT, NOMINATION AND TRANSFER: Assignment and transfer of insurance policies
34	**BCO602**	SECTORS OF INDIAN ECONOMY	CO1	AGRICULTURE IN INDIA: Place of agriculture: Progress-Green revolution-Present state-New thrust areas-Food security
			CO2	INDUSTRIES AND TERTIARY SECTOR IN INDIA: Role and pattern of industrialization-Large-scale industry- Small- scale industry-Information

35	**BCO603**	THEORY AND PRACTICE OF GST	CO1	INTRODUCTION TO GST: Introduction – GST - Taxes Subsumed under GST - Determination of Tax - Registration
			CO2	GETTING STARTED WITH GST: Introduction - Enabling GST and Defining Tax Details-Transferring Input Tax credit to GST
			CO3	RECORDING ADVANCED ENTRIES, GST ADJUSTMENT AND RETURN FILING: Introduction - Accounting of GST Transactions
			CO4	GETTING STARTED WITH GST (SERVICES): Introduction - Determination of supply of services - Determining the Place of Supply of Services
			CO5	RECORDING ADVANCED ENTRIES AND MIGRATION TO ERP: Introduction - Accounting Multiple Services in a Single Supply - Recording Partial Payment
36	**BCO301**	PRINCIPLES OF INSURANCE	CO1	Risk Management, Concept of Insurance, Business of Insurance, Insurance Market and Insurance Terminology Understanding of Risk—Types of Risks
			CO2	Insurance Customer, Insurance Products and Insurance ContractsRisk of Dying Early – Risk of Living too Long
37	**BCO401**	PRACTICE OF LIFE INSURANCE	CO1	INTRODUCTION TO LIFE INSURANCE AND TYPES OF LIFE INSURANCE POLICIES AND PREMIUM CALCULATION :Meaning evolution, growth and principles of Life Insurance —Life Insurance Organizations in India
			CO2	SETTLEMENT OF CLAIMS RISK & UNDERWRITTINGS AND FINANCIAL PLANNING & TAX SAVING: Settlement of claims: Intimation Procedure, documents and settlement procedures.Underwriting:

38	**BCO608**	RELATIONAL DATABASE MANAGEMENT	CO1	BASIC CONCEPTS: Database Management System - File based system - Advantages of DBMS over file based system - Database Approach - Logical DBMS Architecture - Three level architecture of DBMS or logical DBMS architecture
			CO2	DATABASE INTEGRITY AND NORMALISATION: Relational Database Integrity - The Keys - Referential Integrity - Entity Integrity - Redundancy and Associated Problems – Single Valued Dependencies – Normalisation - Rules of Data Normalisation
			CO3	STRUCTURES QUERY LANGUAGE (SQL): Meaning – SQL commands - Data Definition Language - Data Manipulation Language - Data Control Language -
			CO4	TRANSACTIONS AND CONCURRENCY MANAGEMENT: Transactions - Concurrent Transactions - Locking Protocol - Serialisable Schedules
			CO5	DISTRIBUTED AND CLIENT SERVER DATABASES: Need for Distributed Database Systems - Structure of Distributed Database
39	**BCO507**	COMPUTERISED ACCOUNTING	CO1	MAINTAINING CHART OF ACCOUNTS IN ERP: Introduction-Getting Started with ERP - Mouse/Keyboard Conventions
			CO2	MAINTAINING STOCK KEEPING UNITS (SKU): Introduction-Inventory Masters in ERP
			CO3	RECORDING DAY-TO-DAY TRANSACTIONS IN ERP: Introduction-Business Transactions-Source Document for Voucher-Recording
			CO4	ACCOUNTS RECEIVABLE AND PAYABLE MANAGEMENT: Introduction-Accounts Payables and Receivables- Maintaining Bill-wise Details
			CO5	MIS REPORTS: Introduction-Advantages of Management Information Systems-MIS Reports in ERP

39	**BCO307**	ENTREPRENEURAL DEVELOPMENT & BUSINESS ETHICS	C01	INTRODUCTION: Entrepreneur: Evolution-Concept - Functions - Characteristics – Importance of Entrepreneu
			C02	ENTREPRENEURIAL DEVELOPMENT: Entrepreneurial opportunities in India-Environment Scanning– Idea Generation –
			C03	PROJECT AND MSMEs: Project: Concept -Classification - Identification - Formulation – Design - Planning and Appraisal
			C04	ENTTREPRENEURALDEVELOPMENT POLICIES AND PROGRAMMES: Entrepreneurship Development Programmes
			C05	BUSINESS ETHICS: Concept of Business Ethics-Moral Values-Utilitarianism and Universalism
40	**BCO407**	FINANCIAL STATEMENT ANALYSIS	C01	INTRODUCTION: Financial Statements: Meaning – Components: Assets – Liabilities – Equity - Income
			C02	TECHNIQUES OF FINANICAL STATEMENT ANALYSIS: Meaning – Objectives - Techniques:
			C03	RATIO ANALYSIS: Meaning – Objectives – Classification – Advantages and Limitations
			C04	FUNDS FLOW ANANLYSIS: Concept of Fund – Meaning and Importance – Statement of Changes in Working Capital
			C05	CASH FLOW ANALYSIS (AS-3): Meaning – Importance – Differences between Funds Flow and Cash Flow Statements
41	**BCO207**	FOREIGN TRADE	C01	INTRODUCTION: Foreign Trade: Meaning and Definition - Types – Documents used-Commercial Invoice
			C02	BALANCE OF TRADE AND BALANCE OF PAYMENTS: Introduction – Meaning - Components of BOT & BOP - Concept of Disequilibrium

			C03	INDIAN TRADE POLICY: Importance and its Implementation – Current Export Policy and Import Policy.
			C04	FOREIGN TRADE AND TRADE BLOCS: Growth - Significance of Foreign Trade – Merits - Demerits – Trade Blocs
			C05	INTERNATIONAL ECONOMIC INSTITUTIONS: IMF: Objectives - Functions - World Bank: Objectives – Functions - Subsidiaries of World Bank