SR & BGNR GOVT. ARTS & SCIENCE COLLEGE
AUTONOMOUS
KHAMMAM – 507002
OUR MOTTO: "ENTER TO LEARN, LEAVE TO SERVE"

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COURSE OUTCOMES

Department of English

Course Outcomes:-

S. No.	Semester	Course	Credits	Course Outcome
1	I	English for enrichment	4	Ø Students can enjoy all the essays and improves literary skills Ø Students can learn all the grammar skills
2	II	English for enrichment	4	Ø Students will be able to improve comprehensive skills as well as advanced grammar skills Ø Students can understand the values of literature
3	III	English for enrichment	4	Ø The anthology contains selected literary pieces offering glimpses of life and world from different perspectives Ø Students will be able to make use of grammar skills when they face competitive exams
4	IV	English for	4	Ø Students will be able to improve human values by following the given anthology Ø Students can improve telephonic conversations, e-

		enrichment		mails, job oriented skills

Department of Telugu

Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	Sahiti Manjeera	4	Ø Students can enjoy all the essays and improves literary skills Ø Students can learn all the grammar skills Ø Differentiate the methods of old and modern poetry thoughts. Ø Understand the culture of old society and comparison with modern trends.
2	II	Sahiti Manjeera	4	Ø Students will be able to improve comprehensive skills as well as advanced grammar skills Ø Students can understand the values of literature Ø Differentiate the methods of old and modern poetry thoughts. Ø Understand the culture of old society and comparison with modern trends.

S. No.	Semester	Course	Credits	Course Outcomes
3	III	Sahiti Kinnera	4	Ø The anthology contains selected literary pieces offering glimpses of life and world from different perspectives Ø Students will be able to make use of grammar skills when they face competitive exams Ø Differentiate the methods of old and modern poetry thoughts. Ø Understand the culture of old society and comparison with modern trends.
4	IV	Sahiti Kinnera	4	Ø Students will be able to improve human values by following the given anthology. Ø Students can improve prosody and grammar skills Ø Differentiate the methods of old and modern poetry thoughts. Ø Understand the culture of old society and comparison with modern trends.

Department of Mathematics

Course Outcomes:-

S. No.	Semester	Course	Credits	Course Outcomes

1	I	Differential Calculus	5	Gain Knowledge of fundamental concepts of real numbers. Verify the value of the limit of a function at a point using the definition of the limit Introduction to sequence and series. Learn to check function is continuous understand the consequences of the intermediate value theorem for continuous functions.
2	II	Differential Equations	5	Student will be able to solve first order differential equations utilizing the standard techniques for separable, exact, linear, homogeneous, or Bernoulli cases. 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. Student will have a working knowledge of basic application problems described by second order linear differential equation with constant coefficients.

| 3 | III | Real Analysis | 5 | Student will be to understand differentiation and fundamental theorem in differentiation and various rules. Geometrical representation and problem solving on MVT and Rolls theorem. Finding extreme values of function. Describe fundamental properties of the real numbers that lead to the formal development of real analysis. Comprehendrigorous arguments developing the theory underpinning real analysis. Demonstrate an understanding of limits and how they are used in sequences, series, Construct rigorous mathematical proofs of basic results in real analysis |

4	IV	Algebra	5	**Learn to solve system of linear equation. Learn to solve Diophantine equation.** **Learn to find roots of polynomial over rational.** **Learn to find graphs, roots and primes integer using maxima software.** **Introduction to complex analysis. Understand the importance of algebraic properties with regard to working within various number systems.** **Extend group structure to finite permutation groups (Caley Hamilton Theorem).** **Generate groups given specific conditions. Symmetry using group theory.**
5	V **Paper - V**	Linear Algebra	5	**Introduction to vector space and subspace.** **Use computational techniques and algebraic skills essential for the study of systems of Linear equations, matrix algebra, vector spaces, eigenvalues and eigenvectors, Orthogonality and Diagonalization. (Computational and Algebraic Skills).**
6	V Paper - VI	Analytical Solid Geometry	5	**Introduction to analytical geometry of 2 dimensional.** **Study of lines in 2 and 3 dimension.** **Finding equation in various form of line, circle, ellipse, sphere, cones etc.**

7	VI Paper - VII	Numerical Analysis	4	To apply appropriate numerical methods to solve the problem with most accuracy. Using appropriate numerical methods determine approximate solution of ODE and system of linear equation. Compare different methods in numerical analysis w.r.t. accuracy and efficiency of solution.
8	VI Paper - VIII	Vector Calculus	4	To know about gradient, curl of a scalar function. Proving vector identities Learning about laplacian operator, divergent of vector function

DEPARTMENT OF PHYSICS

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Course Outcomes:				
S. No.	Semester	Course	Credits	Course Outcomes

1	I	Mechanics	5	**Students will be able to:** **Ø Understand the concept of central forces and vector analysis.** **Ø Study the behavior of rigid body dynamics** **Ø Understand the negative result of michelson morley experiment, galilean and lorentz transformation** **Ø Students will be able to investigate Young's modulus and rigidity modulus** **Ø Students are able to understand various properties of liquids i.e. surface tension, refractive index, viscosity**
2	II	Waves and Oscillations	5	**Students will be able to:** **Ø Understand the concept of fundamentals of vibrations.** **Ø Understand the concept simple harmonic motion, Damped Oscillations and Force oscillations.** **Ø Understand the concept of vibrating in strings and bars.** **Ø Understand the oscillations in simple, compound pendulum and bifilar suspension.** **Ø Understand the concept laws of stretched strings**

3	III	Thermodyna mics	5	By the end of this course, Students will be able to: Ø Understand the concepts kinetic theory of gases. Ø Understand the concept of Low temperature physics and black body radiation Ø Understand the concept of Maxwell's Equations Ø Understand thermal conductivity of a bad conductor by Lee's method. Ø Understand Specific heat of a liquid by

				applying Newton's law of cooling correction.
4	IV	Optics	5	Students will be able to: Ø Overview of Interference, Diffraction and Polarization. Ø Details of Aberrations and Fiber Optics Ø Understand measurement of wavelength using Newton's Rings method and minimum deviation , Normal method Ø Understand Resolving power of telescope, Dispersive power of prism Ø Understand the optical rotation.

				Students will be able to:
5	V Paper - V	Electromagnetism	4	Ø Study the electric field using coulomb's inverse square law in electrostatics of current Ø Understand the chemical and heating effect of current Ø Understand the relations between b, h and m Ø Understand the faradays laws of electromagnetic induction Ø Understand the Thevenin Theorem, Norton Theorem, Superposition Theorem and maximum power transfer theorem. Ø To determine a small resistance by Carey Foster's bridge. Ø To determine the (a) current sensitivity, (b) charge sensitivity, and (c) CDR of a B.G
6	V Paper - VI	Solid State Physics	4	Students will be able to: Ø Understand the basic concepts of force between atoms and bonding between molecules Ø Analyze the relationship between conductors and insulators and super conductivity Ø Understand about types of lasers and its functioning Ø Understand the PE Hysteresis loop of a Ferroelectric Crystal, the BH curve of Fe using Solenoid & energy loss from Hysteresis. Ø Understand the resistivity of a semiconductor (Ge) with

				temperature

				by four-probe method.

7	VI Paper - VII	Modern Physics	4	**Students will be able to:** Ø **Understand Wave Particle Duality de Broglie hypothesis, Experimental confirmation of matter wave, Davisson Germer Experiment, velocity of de Broglie wave.** Ø **Understand Nuclear Physics Size and structure of atomic nucleus and its relation with atomic weight.** ØUnderstand RadioactivityUnderstand Atomic Spectra and Models of classical physics. Ø **Understand the Thevenin's Theorem, Norton Theorem, Superposition Theorem and maximum power transfer theorem.** Ø **To determine a small resistance by Carey Foster's bridge.** Ø **To determine the (a) current sensitivity, (b) charge sensitivity, and** **(c) CDR of a B.G**

| 8 | VI Paper - VIII | Basic Electronics | 4 | Ø Students will be able to:
Ø Understand Network Elements and Network Theorems.
Ø Understand Band theory of P-N junction, diodes and transistors.
Ø Understand the importance of Digital Electronics.
Ø Understand AND, OR, NOT, NAND and NOR gates Truth table
Ø Understand Characteristics of a Transistor in CE configuration and R.C. coupled amplifier – frequency response.
Ø Understand De Morgan"s Theorem and Zener diode V-I characteristics. |

Department of Botany

Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	Microbial Diversity of Lower Plants	5	Understanding the microbial organisms in nature and their diversity with Lower Plants

2	II	Bryophytes, Pteridophytes, Gymnosperms and Paleobotany	5	Understanding the nature and life cycle of non flowering plants.
3	III	Taxonomy of Angiosperms and Medicinal Botany	5	Identification and taxonomical study Angiospermic plants and Medicinal values of important plants
4	IV	Plant Anatomy, Embryology and Palynology	5	Study of internalstructure of plant parts.
5	V Paper - V	Cell Biology and Genetics	4	Study of biological activities in Cell and Cell Organelles and Genetics
6	V Paper - VI	Ecology and Biodiversity	4	Understanding the ecological problems and remedies for biodiversity
7	VI Paper - VII	Plant Physiology	4	Study of physiological reactions in plants and plant organisms.
8	VI Paper - VII	Seed Technology	4	Understanding the structure, process, storage and transport of Seeds

Course Outcomes:

S. N o.	Seme ster	Course	Cre dits	Course Outcomes
1	I	Animal Diversity - invertebrat es	5	Students will be able to identify and define an invertebrate. Students will be able to classify animals as an invertebrate.
		Animal Diversity		Students will be able to identify and define vertebrate. Students will be able to classify

2	II	- vertebrate s	5	animals as vertebrate.

| 3 | III | Ecology, Zoo-Geography & Animal Behavior | 5 | The larger objective of ecology is to understand the nature of environmental influences on individual organisms, their populations, and communities, on echoscopes and ultimately at the level of the biosphere. If ecologists can achieve an understanding of these relationships, they will be well placed to contribute to the development of systems by which humans could sustainably use ecological resources, such as forests, agricultural soil, and hunted animals such as deer and fish. This is an extremely important goal because humans are, after all, completely reliant on ecologically goods and services as their only source of sustenance. |

				1. Be able to list some of the distinguishing features of prokaryotes versus eukaryotes.
				2. Describe the stages of the cell cycle, of mitosis, and of meiosis. Describe the major function of each step in each cycle, specifically with regards to the chromosomes
				3. Given the number of chromosomes in a diploid organism, be able to determine how many different combinations of chromosomes could be found in the gametes simply due to independent assortment.
4	IV	Cell & Molecular Biology, Genetics and Evolution	5	4. Be able to perform problems similar to those we've done in class, in Problem Set 1, and those at the end of each chapter covered. In summary, (a) be able to predict the phenotypic classes and their ratios from a monohybrid cross involving dominant and recessive alleles; (b) be able to predict the phenotypic classes and their ratios from a cross involving co-dominant or incompletely dominant alleles; (c) be able to predict the ratio of a specific genotype and/or phenotype from a cross involving

				multiple independently assorting genes (d) be able to recognize when two interacting genes are influencing the expression of each other, which will be reflected in the numbers and ratios of phenotypic classes of the F2 progeny resulting from a dihybrid cross , (e) given the phenotypes of parents

				and the phenotypes and ratios of F1 and/or F2 progeny, be able to distinguish between a trait that is determined by two alleles at one gene manifesting incomplete dominance versus two genes interacting with each other epistatically;
				5. Be able to list features of an organism that could make it a good genetic model. Be able to cite features of peas and flies that make them ideal organisms in which to study many aspects of genetics. **6.** Be able to perform and interpret the results of a Chi Square analysis. **7.** Be able to distinguish between maternal effect, sex-linked, and cytoplasmic modes of inheritance. **8.** Be able to look at a pedigree chart and discern the most likely mode of inheritance. **<u>EVOLUTION</u>** The relationship between natural selection and evolution • What is adaptive radiation? • What is the difference between homologous and analogous? • How do fossils

				provide a historical record of evolution? • How is evolution observed at the molecular level? • Hardy-Weinberg equilibrium • What are the agents of evolution? • Three types of selection: stabilizing, disruptive, and directional Learning Objectives • Human impact on natural selection Industrial melanism§ • Guppies as an example of natural selection
				• What is the biological species concept? • What are the two categories of barriers to reproduction? • What are the six isolating mechanisms that fall into the category of pre-zygotic barriers to reproduction? • Post- zygotic barriers to reproduction.

				1-The major aims of this course are to provide students with a basic understanding of the fundamental processes and mechanisms that serve and control the various functions of the body. To learn to properly and safely use animals and modern laboratory equipment to conduct research. Biochemistry is the study of biological

| 5 | V-SEM

V-Paper | Physiology and Biochemistry | 4 | phenomena at the molecular level. Its aim is to understand the fundamental chemical principles that govern complex biological systems.

The program is an interdepartmental major between biology and chemistry that emphasizes the importance of a solid foundation in the natural sciences, including mathematics and physics.

The major focuses, however, on disciplines within biology and chemistry, ranging from cell biology and molecular biology to analytical chemistry and physical chemistry.

The Programme seeks to graduate biochemists who are conversant in concepts ranging from biological evolution to quantum chemistry.

Understanding the molecular logic of life and being able to participate in the acquisition of this knowledge is integral to the liberal education.Our required courses come from the existing offerings in biology and chemistry. We rely on the goodwill of both to fulfill these general education responsibilities. We also rely on those departmental courses to develop our students' cognitive and technical skills, skills that will make them scientifically literate and able |

				to contribute to the discipline during their Vassar careers and after graduation.
				The primary objectives of the major are
				1) to give students a solid foundation in biology and chemistry;
				2) To develop analytical and critical- thinking skills that allow independent exploration of biological phenomena through the scientific method. 3) To introduce students to modern methods of biochemical experimentation within the disciplines of biology and

				chem istry.
				Development of existing water bodies and creation of additional water area for large scale fish production. **Reclamation/rehabilitation of marshy and swampy lands and Bheels and other water area and developing them into modern fish production system.**

6	V Paper - VI	Applied Zoology	4	Creation of mass awareness, capacity building, exposure training and skill development of all the stakeholders, for long term sustainability of fishery sector. Conservation of native, endangered and traditional species (Masher and Chocolate Masher) of Meghalaya and developing breeding farms of commercially potential species on a large scale. Introduce and promote ornamental fisheries as also diversify the current range, so as to capture several emerging opportunities in the aquaculture sector viz., fresh water scampi culture, etc. Enhancement of water storage capacity through development of small water areas and microclimate to sustain agricultural production . Extend all technical support at the door step of the stakeholders. **sericulture** Motivating the farmers to plant high yielding mulberry varieties to increase income and productivity. Imparting training in mulberry cultivation, silkworm rearing and silk reeling.

				Assist in procurement of improved rearing equipment and construction of separate rearing house.
				Ensure supply of disease free silkworm seeds.
				Enhance skill of farmers for increased cocoon productivity and to prevent silkworm diseases.
				Provide assistance to establish silk reeling units in the private sector.
				Provide assistance to establish drip irrigation system in mulberry gardens.
				Assist sericulturists and reelers to dispose of their cocoon, silk etc., in regulated cocoon markets /silk exchange
				Facilitate sericulturists to adopt new technologies developed.
				APICULTURE
				"To establish areas of conservation throughout the island for the conservation of the native Irish honey bee."
				To help promote areas of conservation throughout the island to conserve the native Irish honey bee.

				"To promote the formation of Bee Improvement groups." To liaise with bee-keepers with a view to establishing bee improvement groups. To advise and encourage bee-keepers to promote our aims and objectives. **In pursuit of Aim** **"To provide education on Bee improvement and awareness to the public of the values of the native Irish honey bee."** To provide information as to where local improvement groups are established. To provide information about ongoing events. **Animal Husbandry:** To satisfy the need for food of the growing population. To do proper management of the domestic animals. Todevelop high yielding breeds of animals. To increase the standard of living of formers. To increase the production of milk. To increase the production of eggs. To increase the

				production of meat. To increase the production of Fish. To help in systematic disposal of animal wastes and maintaining a healthy environment.

7	VI Paper - VII	Immunology and Animal Biotechnology	4	**The students will be able to identify the cellular and molecular basis of immune responsiveness.** **The students will be able to describe the roles of the immune system in both maintaining health and contributing to disease. The students will be able to describe immunological response and how it is triggered and regulated. The students will be able to demonstrate a capacity for problem-solving about immune responsiveness.** **Identification and characterization of animal breeds,** **Developing DNA - based diagnostics and genetically engineered vaccines for animals,** **Studying animal genomics and its varied applications**

Department Of Chemistry

Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	Chemistry – I	05	**By the end of this course, Students will be able to:** v Inculcate industrial applications of carbides, silicones, acidity and reactivity of boran compounds. v Detail understanding of various compounds of elements of p-block and theoretical knowledge to perform semi micro analysis i.e Identification of inorganic salts. v Understand the concept nature of chemical bond. v Overview of periodic table and S,P block elements v These topics provide excellent understanding of basic knowledge of organic chemistry in future of course. v These topics give a foundation to cater the needs of quantum mechanics future of course and use full to learn behaviour of real gases, liquification

				phenomenon, viscosity of liquids etc.

| 2 | II | Chemistry – II | 05 | By the end of this course, Students will be able to:
v **Understand reactivity and structures of oxides, oxy acids, structures of inter halogen compound. zero group elements and d-block elements.**
v **Understand the concept structure and bonding in organic compounds.**
v **Understand the concept of stereochemistry.Understand different types of reaction mechanism.**
v **Understand alkanes, alkenes. Understand the aromaticity of organic compounds.**

v **Understand the crystal structures, solutions,colligative propertiesCertain physical techniques such as steam and fractional distillation methods. separation techniques based on Nernst law.**

v **Understand the quantitative analysis (volumetric analysis)and gravimetric analysis**
v **Inculcates the practical knowledge of identification and confirm the given unknown salt mixture** |

| 3 | III | Chemistry – III | 0 5 | v Understand the chemistry of –F-blck and non aqeous solvents. and symmetry of the compounds.
v Understand the structure and chemical bonding in aryl ,alkyl halides,aldehydes.
v Understand the structure and chemical bonding in alcohols and phenols..
v Understand chemical reactions of acids, alcohols, phenols etc.
v Understand the phase rule and phase diagramme. Surface chemistry and adorption, their importance in industry
v Understand the stereo chemistry of carbon compounds. Its importance in research field. Importance of nano materials in medical and industrial field.
v Volumetric analysis, and gravimetric analysis. estimation of carbonate, bicarbonate, copper etc. |

4	IV	Chemistry – IV	0 5	v Understand the chemistry complex compounds, metal carbonys and organometallic compounds and applications. v Understand the chemistry of carboxylic acids and their derivatives , active methylene compounds and nitro compounds . industrial and research importance. v Understand the electrolytical cells, electrochemical cells applications batteries industry. Conductometric titrations, emf etc. v Understand the modern approach ofchemistry i.e pericyclic reactions, strategic synthesis and stereoselectivity and their research applications v To estimate the concentrations of given compounds by technical methods. Conductometry and potentiometry.
5	V Paper - V	Chemistry – V	4	v Understand the CFT, magnetic properties, colour properties, applications of complex compounds. v Understand the chemistry amines and heterocyclic compounds and their importance medical fields.

6	V Paper - VI	Chemistry – VI	4	v By the end of this course, Students will be able to: Understand the thermodynamics of chemical reactions.Understand the concept of chemical kinetics.
				v Understand the spectroscopic techniques to elucidation of the given compound. Gains the knowledge of I.R, U.V and ELECTRONIC SPECTRAL TECHNIQUES v Students are able to Preparation of and checking purity through T.L.C ,of few organic compounds
7	VI Paper - VII	Chemistry – VII	4	v Student able to understand the reaction mechanism of inorganic complexes, inert and labile nature ,bio inorganic chemistry i.e importance of micro and macro nutrients in human. v Student able to understand the the chemistry and reactions of carbohydrates and amino acids. Their importance in medical and biological fields. v Student able to understand the thermo chemical reactions and thermodynamic parameters, spontaneous and non spontaneous, equilibrium, Cp and Cv, thermodynamically carried processes such as entropy etc.,

				v Students are able to identify and confirm the given organic compounds and able to test the purity samples.
8	VI Paper - VIII	Chemi stry – VIII	4	v Understand the various types of diseases and various terms involved in medicinal chemistry. nomenclature of drugs and therapeutic activity of drugs. absorption , distribution, metabolism and elimination of drugs. v Understand the chemistry of enzymes and theiraction, drug action –receptor theory , drug function with an example. v Understand the synthesis of drugs and about the drugs to treat metabolic disorders. And those drugs which acting on nervous system v Understand about molecular messenger and health promoting drugs in detail. v Students are able to perform practicals of various physical chemistry experiments and gain the sound knowledge of their significance.

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Department of History

Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	History of India (From Earliest Times to c.700 CE)	5	Ø It provides a base for understanding the Indian history. Ø Helps the student to understand the history of early India from the prehistoric times to the age of the Mauryas. Ø Emphasizes on the factors and forces behind the rise, growth and spread of civilization and culture of India along with the dynastic history. Ø To help the students to understand the contribution of Early Indians to polity,philosophy, literature, art, religion and science and technology.

2	II	History of India (700-1526 CE)	5	Ø Students will come to know consequences of the foreign invasions, particularly on the polity, society, economy and art and architecture. Ø Students can acquire the knowledge on Arab Conquest, foundation of Delhi Sultanate and Growth of Education and Literature – and the decline of Delhi Sultanate.
3	III	History of India (1526-1857 CE)	5	It provides the knowledge to understand the following Ø Establishment of Mughal Dynasty Ø Rise of Regional Powers - Marathas, Sikhs. Ø Rise of Princeley States – Hyderabad – Avad - Junagarh – Mysore – Kashmir. Ø Advent of European Powers Ø Decline of Rural Cottage Industries and Urban Handicrafts Ø 1857 Revolt – Nature, Causes and Results.

4	IV	History of India (1858-1964 CE)	5	**It provides the knowledge to understand the following** Ø Queen's Proclamation Ø Socio-Religions Reform Movements Ø Factors for the Rise of Nationalism Ø Revolutionary Movement Ø Emergence of Communal Politics Ø Jawaharlal Nehru and His Policies
5	V Paper - V	History of the Modern World (From 1453 CE to 1815 CE)	5	**It provides the knowledge to understand the following** Ø Decline of Medieval Socio-Political, Religious, Economic conditions Ø Rise of Capitalism

6	V Paper - VI	History and Culture of Telangana (From earliest times to 1724 CE)		**It provides the knowledge to understand the following** Ø Pre-History of Telangana Ø Brief Political Survey of Satavahanas, Ikshvakus, Vishnukundins, Medieval Telangana from Kakatiyas to Qutb Shahis.

7	VI Pa pe r - VII	History of the Modern World (From 1815 to 1950 CE)	5	Ø To understand the contemporary world in the light of its background History. Ø To become conversant with political history of Modern World. Ø To provide knowledge about the main developments in the Contemporary World (To understand to important development in 20th century World.) Ø To gain knowledge about world concepts. Ø To enable students to understand the economic transition in World during the 20th Century and create awareness about the principles, forces, processes and problems of the recent times. Ø To impart the students with growth of various political movements that shaped the modern world. Ø To bring to light the rise and growth ofnationalism as a movement in different parts of the world.
8	VI Pa pe r -	History and Culture of Telangana (1724	5	Ø Foundation of Asaf Jahi Dynasty Ø Political Developments in Hyderabad State 1900 to 1942 Ø Anti-Nizam and Anti-Feudal Movements Ø December 2009 Declaration

	VIII	- 2014 CE)		and the Formation of Telangana State, June 2014.

Department of Economics

Course Outcomes

S. N o.	Sem ster	Course	Cre dits	Course Outcomes
1	I	Micro Economic s	5	Students will be able to recognize, apply and analyze concepts and theories in micro economics Student will develop an ability to attempt questions in competitive examinations Students will be able to appraise and assess the theories in micro economics and apply them in real life situations Ability to develop an

				understanding of the subject areas in Economics with its intricacies and imperfections and to be able to construct intellectual dialogue. Ability to discuss and debate on the changing structures and theoretical developments in the subject.
2	II	Macro Economics	5	Students will be able to explain the concepts of macro economics like opportunity cost, economic fluctuations etc Students will be able to explain the concepts of National income, inflation and concepts related to inflation and unemployment, and how they are measured. Students will be able to explain the circular flow model and use the concepts of aggregate demand and aggregate supply to analyze the response of the economy to disturbances. Students will be able to

				describe the determinants of the demand for money, the supply of money and interest rates and the role of financial institutions in the economy. **Students will be able to define fiscal and monetary policies and how these affect the economy.**
3	III	Statistics For Economics	5	It enhances them to compute and assess the real situation of economy Identifying graphical and numerical methods to calculate amd illustrate descriptrive statiscs.To know about matrices ,sverages probability etc.

4	IV	Public Economics	4	**Understanding the meaning and functions of public finance Judging the progress of financial inclusion**

				Measuring growth volume composition of public fianance.
5	V	Telangana Economy	5	**1)** **Understanding characteristics ,features structural changes in telangana economy** **2)** **know the problems of unemployment poverty&economic inequality 3)Evaluating the changing role ofagriculture Industrial & service sector**
		Develo pment Econo		Understanding the concept and aspect of development economics Knowing the theories of economic growth &development

6	VI	mics	5	Measuring the concept and issue of economic planning

Course Outcomes

S. N o.	Semes ter	Course	Credit s	Course Outcomes
1	I	Political Science: Concepts, Theories And Institutions	5	Ø Acquiring The Knowledge About Political Theories And Concepts. Ø Getting The Awareness About Political Institutions, Their Types, Functionality And Duties. Ø Understand The Basic Principles Of Politics Including Governing Institutions And Branches, Political Wings And Organisations.
2	II		5	

3	III	Indian Government & Politics	5	Ø Acquiring The Knowledge About Indian Constitution. Ø Getting Awareness About Ones Rights & Duties. Ø Getting Information About Political Parties And System Of Justice In India.
4	IV		5	Ø Knowledge About TheProblems And Challenges In Indian Politics.
5	V Paper - V	Western Political Thought	4	Ø Getting Information AboutWestern Political Thinkers And Political Thoughts And Ideologies.
6	V Paper - VI	International Relations - I	4	Ø Study Of The International Political System Ø Study Of The International And Regional Organisations And History Of International Relations

7	**VI Paper - VII**	**PapeIndian Political Thought**	**4**	**Ø Getting Information About Western Political Thinkers And Their Political Thoughts**
8	**VI Paper - VIII**	**International Relations - II**	**4**	**Ø Study Of The Bilateral Relations Of India With Neighbouring Countries, International Security And Emerging Issues.**

Department Of Public Administration

Course Outcomes:

S. No.	Semester	Course	Credits	Course Outcomes
1	**I**		**5**	**1) to understand the nature and scope of public administration 2)to appreciate the methodological pluralism and synthesizing nature of**

2	**II**	**Basics Of Public Adminis tration**	**5**	knowledge in public administration 3) to comprehend the changing paradigm of public administration 4) to acquaint with the theories,approaches,conce pts and principlel of public administration 5) to understand the administrative theories and concepts to make sense of administrative practices 6) to understand the role of public services in the emergence and and development of telangana state
3	**III**	**Indian Administration**	**5**	1) getting knowledge about the administrative system of the india 2)Getting awareness about ones rights&duties 3)Getting information about political parties and system of justice in india 4)knowledge about the problems and challenges in Indian politics
4	**IV**	**State Administration**	**5**	1) getting knowledge about the administrative system of the state 2) Getting awareness about the state level government organisatios

5	**V** **Paper** **- V**	**Human Resource Management**	**6**	**Getting information about the scope and significance of human resource management to understand the changing paradigms of resources management**

				to identify the systems and processes of financial material management
6	**V** **Paper** **- VI**	**Rural Governance**	**5**	**To aware the evolution and continuance of local self governments.** **To impart the knowledge the regarding the rural governance To develop the changing patterns of development programme in the rural areas**
7	**VI** **Pape** **r -** **VII**	**Financial And Material Management**	**6**	**to understand the indian financial system** **to undrstand the various parliamentary related committees** **To develop the knowledge relating the budget process.**

| 8 | VI Paper - VIII | Urban Governance | 5 | to identify the the urban local bodies

to understand the concept of democratic decentralisation to comprehend the institutional arrangements and processes of urban governance |

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Department Of Commerce

Course Outcomes:

S. No.	Semester	Title of the Paper	Credits	Course Outcome
1	I	Financial Accounting – I	5	Ø Students will be able to acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

2	**I**	**Business Economics**	**5**	**Ø** Students will be able to acquire the knowledge of application of economic principles and tools in business practices. **Ø** To arouse the students interest by showing the relevance and use of various economic theories. **Ø** To apply economic reasoning to solve business problems.
3	**I**	**Business Organizatio n**	**4**	**Ø** Students will be able to acquaint the students with the basics of Commerce and Business concepts and functions and forms of Business Organization

4	**II**	**Financial Accounting – II**	**5**	Ø To enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting. Ø The student will get thorough knowledge on the accounting practice prevailing in partnership firms and other allied aspects. Ø To find out the technical expertise in maintaining the books of accounts. Ø To encourage the students about maintaining the books of accounts for further reference.
5	**II**	**Managerial Economics**	**5**	Ø It will impart conceptual and

				practical knowledge of managerial economics. Ø To aware students about Gross National Product (GNP), Net National Product (NNP) ,Income at Factor cost or National Income at Factor Prices ,Per Capita Income , Personal Income (PI)Disposable Income etc. Ø To Study the relationship among broad aggregates.

6	**II**	**Principles of Management**	**4**	Ø **Students will be able to to familiarize the students with the basic principles of management.** Ø **To understand the concept & functions and importance of management and its application.** Ø **To make the student understand principles, functions and different management theories.**
7	**II**	**Foreign Trade**	**4**	Ø **Students will be able to gain the knowledge of Indian and foreign trade policies and international institutions.**
8	**III**	**Advanced Accounting**	**5**	Ø **To acquire accounting knowledge of partnership firms and joint stock companies** Ø **To provide the knowledge of various accounting concepts** Ø **To impart the knowledge about accounting methods, procedures and techniques.** Ø **To acquaint students with practical approach to accounts writing by using software package and by learning various accounts.**
9	**III**	**Business Statistics-I**	**5**	Ø **To inculcate analytical and computational ability among the students.**
1 0	**III**	**Income Tax -I**	**4**	Ø **To acquire the conceptual and legal knowledge about Income Tax provisions relating to computation of Income from different heads**

				with reference to an Individual Assesse.. **Ø Students will be versed in the fundamental concepts of Auditing and different aspects of tax.** **Ø Students can understand Income Tax system properly, and can get the knowledge of different tax provisions.** **Ø To give knowledge about preparation of Audit report, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities underthe Income Tax Act, 1961.**
1 1	**III**	**Entrepreneurial Development, Business Ethics**	**4**	**Ø To have exposure to the entrepreneurial culture, development and business ethics to set up and manage small units.** **Ø To develop entrepreneurial awareness among students.** **Ø To motivate students to make their mind set for thinkingentrepreneurship as career.**

1 2	**IV**	**Corporate Accounting**	**5**	**Ø To acquire the knowledge of AS-14 and preparation of accounts of banking and insurance companies.** **Ø This course aims to enlighten the students on the accounting procedures followed by the Companies.** **Ø Student's skills about accounting standards will be developed.** **Ø To make aware the students about the valuation of shares.** **Ø To impart knowledge about holding company accounts, amalgamation, absorption and reconstruction of company.**
1 3	**IV**	**Business Statistics-II**	**5**	**Ø To inculcate analytical and computational ability among the students.**
1 4	**IV**	**Income Tax –II**	**4**	**Ø to acquire the conceptual and legal knowledge about Income Tax provisions**

				relating to computation of Income from different heads **with reference to an Individual Assessee.**
1	**IV**	**Financial Inst.&Markets (BCom Gen)**	**4**	**Ø To familiarize with various Financial Institutions and Markets.**

5				
1 6	**V**	**Cost Accounting**	**5**	**Ø To make the students acquire the knowledge of cost accounting methods.** **Ø To understand Basic Cost concepts, Elements of cost and cost sheet.** **Ø Providing knowledge about difference between financial accounting and cost accounting.** **Ø Ascertainment of Material and Labor Cost.** **Ø Student's Capability to apply theoretical knowledge in practical situation will be increased.**

1 7	**V**	**Business Law**	**5**	**Ø To make the students acquire the basic conceptual knowledge of different laws relating to Business.** **Ø To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.** **Ø To apprise the students of new concepts involving in company law regime.** **Ø To acquaint the students with the duties and responsibilities of Key Managerial Personnel.** **Ø The student will well verse in basic provisions regarding legal frame work governing the business world.** **Ø To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws.** **Ø To develop the awareness among the students regarding these laws affecting tradebusiness, and commerce.**

1 8	**V**	**Banking Theory & Practice**	**4**	**Ø To acquire the knowledge of the working of the Indian Banking system.** **Ø To familiar the students with the fundamentals of banking and thorough knowledge of banking operations.** **Ø To build up the capability of students for knowing banking concepts and operations.** **Ø To make the students aware of banking business and practices.** **Ø To make understandable to the students regarding the new concepts introduced in the banking system.**
1 9	**V**	**Compute rised Accounti ng**	**4**	**Ø To acquire basic knowledge in the computerised accounting systems and its applications in the area of business.**
2 0	**V**	**Financial Institutes & Markets (For BCom (CA) only)**	**4**	**Ø To familiarize with various Financial Institutions and Markets.** **Ø Enable the students with Financial Markets and its various segments.** **Ø To give the students and understanding of the operations and developments in financial markets in India.**
2 1	**V**	**Financial Management Spl-1 (OR)**	**4**	**Ø To understand the basics in financial management.**

2 2	**V**	**Principles of Marketing Spl-2 (OR)**	**4**	**Ø To expose to the basics of marketing management as a functional area and to understand the various decisions under this discipline.** **Ø This course enables the students, the practical knowledge and the tactics in the marketing.** **Ø To study and critically analyze the basic concepts and trends in Marketing.** **Ø To aware of the recent changes in the field of marketing.**

2 3	**V**	**Compute rised Accounti ng (For BCom(CA) only)**	**4**	**Ø To acquire the knowledge of managerial accounting decision making techniques, preparation of budgets and estimation of working capital.**
2 4	**VI**	**Managerial Accounting**	**5**	**Ø To understand the legal provisions applicable for establishment- management and winding up of companies in India.**
2 5	**VI**	**Company Law**	**5**	**Ø To understand the meaning and elements of auditing and gain the knowledge ofexecution of audit.**

2 6	**VI**	**Auditing**	**4**	**Ø To become familiar with various business documents and acquire practical knowledge, which improve over all skill and talent.** **Ø Students will be versed in the fundamental concepts of Auditing** **Ø To give knowledge about preparation of Audit report.**
2 7	**VI**	**Commerce Lab**	**4**	**Ø To understand about filling of Banking vouchers, insurance documents and registration of businesses.**
2 8	**VI**	**Human Resource Management Spl-1 (For BCom (Gen)**	**4**	**Ø To gain knowledge of the basics of Human Resource Management.**
2 9	**VI**	**E-Commerce (For BCom (CA)**	**4**	**Ø To acquire conceptual and application knowledge of ecommerce.**
3 0	**VI**	**Tax Planning & Management Spl-2 (For BCom (Gen)**	**4**	**Ø To equip with the conceptual and legal knowledge about Tax planning and Management with reference to various Heads of Income relating to an Individual Assessee.**
3 1	**VI**	**Management Information System (For BCom (CA)**	**4**	**Ø To know about the Management Information System**

| 3 2 | VI | Regulation of Insurance Business (SEC) | 2 | To equip the students with the knowledge regarding Insurance Business Regulations |

Department Of Computer Science & Applications

COURSE OUTCOMES

S. No.	Semester	Course	Credits	Course Outcome
1	BSC (MPCs) Sem ester - I	Programming In C	5	Explore algorithmic approaches to problem solving. Ability to analyze a problem and devise an algorithm to solve it.Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems.

				Ability to implement algorithms in the 'C' language. Develop modular programs using control structures and arrays in 'C'.
2	B.Com.(CA) Sem ester – I	Informatio n Technolog y	4	Students will be able to acquire basic knowledge in Information Technology and its applications in the areas of business

3	**B.A. (HPC A) Semester - I**	**Introduction to Computers & MS Office**	**4**	**Students will be able to acquire basic knowledge/skills in Computers and MS Office**
4	**BSC (MPCs) Sem ester - II**	**Object Oriented Programming In C++**	**5**	**Able to understand the concept of object oriented programming. · Use the benefits of object oriented design and understand when it is an appropriate methodology to use. · Design object oriented solutions for small systems involving multiple objects.**
5	**B.Com.(CA) Sem ester – II & B.A. (HPCA) Semester – II**	**Programming with C**	**4**	**Explore algorithmic approaches to problem solving.** **Ability to analyze a problem and devise an algorithm to solve it.** **Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems.** **Ability to implement algorithms in the 'C' language.** **Develop modular programs using control structures and arrays in 'C'.**

6	**BSC (MPCs) Sem ester – III**	**Data Structures using JAVA**	**5**	**Understand to implement object oriented programming concepts. · Understand how to design graphical user interface in Java programs. · Understand how to design and develop applets. · Able to design User Interface using Swing and AWT. · Understand concept of packages and study how to implement them.**
7	**B.Com.(CA) Sem ester - III**	**Fundamentals Of Web Designing**	**4**	**The aim of this course is to provide the conceptual knowledge of web page design which enables thestudent to develop the skill of web**

				page design.
8	**B.A. (HPCA) Semeste r - III**	**Relation al Databas e Manage ment**	**4**	**Able to understand database concepts and database management system software. · Analyze and design a real database application. · Develop and evaluate a real database application using a database management system. · Able to develop applications using PL/SQL & front end tools.**

9	**BSC (MPCs) Sem ester – IV**	**Data Base Management System**	**5**	**Understand fundamental concepts of database. · Understand user requirements and frame it in data model. · Ability in creations, manipulation and querying of data in databases. · Ability to solve real world problems using appropriate set, function, and relational models. · Ability to design E-R Model for given requirements and convert the same into database tables.**
1 0	**B.Com.(CA) Sem ester -IV**	**Relation al Databas e Manage ment**	**4**	**Able to understand database concepts and database management system software. · Analyze and design a real database application. · Develop and evaluate a real database application using a database management system. · Able to develop applications using PL/SQL & front end tools.**
1 1	**B.A.(HP CA) Sem ester – IV**	**Fundament als Of Web Designing**	**4**	**The aim of this course is to provide the conceptual knowledge of web page design which enables the student to develop the skill of web page design.**

1 2	**BSC (MPCs) Sem ester – V Paper - V**	**Operating Systems**	**5**	**Understand the role of operating system as System software. · Able to compare the various algorithms and comment about performance of various algorithms used for management of memory, CPU scheduling, File handling and I/O operations. · Understand various concept related with Deadlock to solve problems related with Resources allocation, after checking system in Safe state or not. · To understand role of Process synchronization towards increasing throughput of system.**
1 3	**BSC (MPCs)**	**Programming**	**5**	**To Learn Python scripting elements to Discover how to work with lists**

	Semester – V **Paper - VI**	**With Python**		**and sequence data.** **Write Python functions to facilitate code reuse.** **Use Python to read and write files.**
	B.Com.(C A)			**Able to understand the concept of object oriented programming. · Use the benefits of object oriented**

14	**Sem ester – V** **&** **B.A.(HPC A)** **Sem ester – V**	**Object Oriented** **Programmin g In** **C++**	**4**	**design and understand when it is an appropriate methodology to use. · Design object oriented solutions for small systems involving multiple objects.**
15	**BSC (MPCs)** **Sem ester – VI Paper - VII**	**Softw are Engine ering**	**5**	**Able to design and conduct experiments, as well as to analyze and interpret data. · Able to identify, formulate, and solve engineering problems. · Able to analyze, design, verify, validate, implement, apply, and maintain software systems. · Able to understand different phases of SDLC.**
16	**BSC (MPCs)** **Sem ester – VI Paper - VIII**	**Web Technology**	**5**	**The aim of this course is to provide the conceptual knowledge of web page design which enables the student to develop the skill of web page design.**
17	**B.Com.(C A)** **Sem ester – VI**	**E-Commerce**	**4**	**To acquire conceptual and application knowledge of ecommerce.**

18	B.A. (HPCA) Semester – VI Paper - VII	Visual Programming	4	Understand the basics of Visual Programming
19	B.A. (HPCA) Semester – VI Paper - VIII	Computer Networks	4	Understand basic computer network technology. · Understand and explain Data Communications System and its components. · Able to identify the different types of network topologies and protocols

BACHELOR OF BUSSINESS ADMINISTRATION

COURSE OUTCOMES:

SEMESTER-1
PRINCIPLES OF MANAGEMENT

Course Outcomes

CO-1.Student understand the meaning, principles and evolution of management and further to enhance their knowledge in its functions.

CO-2: To present the importance of Planning and Decision Making.

CO-3: To acquaint student the concepts of Organizing, Span of Management, Patterns of organization and Common organizational structures.

CO-4: To present the sources of recruitment and Training. CO-5 : To present the emerging issues in management.

BASICS OF MARKETING

Course Outcomes

CO-1: To understand the concept of Marketing and Selling.

CO-2: To understand the concept of Market Segmentation and its importance in marketing.

CO-3: To present process of new product development.

CO-4: To present the techniques New Product Development and Pricing decisions during the life of a product.

CO-5: To understand the importance and effectiveness of Promotional Mix.

BUSINESS ECONOMICS

Course Outcomes

CO-1: To understand the nature and scope of Business Economics.
CO-2: To comprehend the Demand Concepts and Elasticity of
Demand. CO-3: To apprehend theory of production and cost
concepts.

CO-4: To learn short and long run cost curves and economies and diseconomies of scale.

CO-5: To grasp the concept of market and its structures.

SEMESTER-II
ORGANIZATIONAL BEHAVIOUR

Course Outcomes

CO-1: To understand nature, factors influencing and scope of Organizational development.
CO-2: To comprehend the concept, importance and theories of motivation and Leadership.
CO-3: To apprehend of groups and group dynamics.

CO-4: To understand the concept of management of Change.

CO-5: To grasp the concept of Organizational Culture, Conflict and Effectiveness

BUSINESS STATISTICS
Course Outcomes

CO-1: To understand the importance of Statistics in Business decisions and classification of data.
CO-2: To introduce the measures of central tendency.

CO_-3: To understand the significance and requisites of measuring dispersions, Skewness and kurtosis.
CO-4: To help the students in understanding the importance of Index Numbers in business decisions.
CO-5: To understand the concept of Correlation and Regression in business decisions

FINANCIAL ACCOUNTING

Course Outcomes

CO-1 : To understand the purpose and principals of Accounting and nature of

Accounts. CO-2: To learn preparation of various types of books.

CO-3: To learn preparation of Financial

Statements. CO-4: To learn analyzing of Financial

Statements,

CO-5: To understand the importance of Accounting Standards, procedure for issue and

importance of IFRS and Ind-AS

SEMESTER-4
BUSINESS LAW & ETHICS
COURSE OUTCOMES:

CO1: To understand Introduction of law & Indian Contract act and its case studies

CO2: To Understand about special contracts and sale of goods act.

CO3: To Understand about company , its formation, directors, meetings.

CO4: To understand consumer protection law in India, rights of consumer awareness, Pollution and Environmental Control Law

CO5: To Understand Business ethics and efficiency.

MARKET RESEARCH
Course Outcome

CO-1 : To understand the need for marketing research and process of marketing research.

CO-2 : To present various sources of data and its collection.

CO-3 : To present various sources of secondary data

CO-4: To understand various measurement and scaling techniques.

CO-5: To understand various Sampling methods available.

MANAGEMENT SCIENCE

Course Outcome

CO-1: To understand the production and operations process and its functions.

CO-2 To understand the importance of capacity planning, factory location, plant layout, sequencing of operations and work study.

CO-3: To present the various purchase and stores management techniques.

CO-4: To know the importance of Operations Research and Linear Programming.

CO-5: To understand Transportation, Assignment and Queuing techniques.

SEMESTER-5
BRAND MANAGEMENT
COURSE CODE :BBA501
Course Outcomes:

CO1-TO understand tje nature, scope and the meaning with significance of branding. CO2- TO create the awareness in branding and advertising and their strategies.
C03- To understand the cincept of brand extensions .

C04- TO learn about the brand positioning and re-positioning personality.
C05- To understand the sources of branding and the concept of brand equity.

RETAIL MANAGEMENT

Course Outcome

CO1- To understand the role of retailing and the concept of FDI in Indian Retailing. CO2- To understand the theories and formats of Retail Development.
CO3- To know the meaning of Merchandising and analyzing performance. CO4- To create the awareness of Retail store designs and its significance. CO5- To know the role of physical distribution management.

CUSTOMER RELATIONSHIP MANAGEMENT

Course Outcomes:

CO1- To understand the concept and evolution of Customer Relationship. CO2- TO Know the CRM concepts and its significance.
CO3- To know the steps in the planning and Strategy development process in CRM. CO4- To understand the CRM marketing initiatives and service sectors.
CO5- TO understand the Implementation problems in CRM

BUYER BEHAVIOUR

Course Outcomes:

1. Be able to identify the dynamics of human behavior and the basic factors that influence the consumers' decision process
2. To understand the depth concept & theories of Consumer buying Behavior
3. To Know the impact of culture on Buyer Behavior.
4. To understand and evaluate the alternatives in the buying decision process.
5. To understand different models of buyer behavior and be able to demonstrate how they may be applied to marketing strategy

ADVERTISING AND SALES PROMOTION

Course Outcomes:

1) It helps the students to understand the importance of advertisements for promotion of products.
2) To understand Communication decision process, Types of Advertisements, Creative Approaches and Execution styles. Advertisement Appeals.
3) Identify the different range and characteristics of media evaluate the effectiveness of different media in relation to advertising.
4) students will have the ability to demonstrate the theories and concepts that are central to personal selling.
5) To understand different types and tools of Sales promotion and Implement the best sales management strategy for organization.

RURAL MARKETING

Course Outcomes :

CO1.To expose the learners to the issues of Rural markets ,Reforms and Development in the last few decades.
CO2.To help the students in understanding the nature ,characteristics of rural markets and consumers and their buying decision process.
CO3.To understand Product Mix Decisions and Competitive product strategies for Rural Markets.
CO4.To understand Innovative pricing methods for Rural Markets ,Appropriate Media & Designing Right Promotion Mix.
CO5.To analyze appropriate channels of distribution and to explore new approaches to reach out rural markets.

DEPARTMENT OF BIO TECHNOLOGY

COURSE OUTCOMES (COS)

S.NO	Semester	Course	credits	Course outcomes
1	I	Cell Biology and Genetics	5	Students develop basic knowledge of cell structure which helps them to apply in the field of research. The basic knowledge of genetics helps the student to understand hereditary disorders and genetic related characters to develop desired traits in animals and plants.
2	II	Biological chemistry and microbiology	5	Biochemical experiments help students to study the character and diagnosis of diseases and microbiology principles helps to develop skills in clinical pathology.
3	III	Molecular biology and rDNA technology	5	Molecular biology experiments are current trend for all kinds of disease diagnosis, students will develop skills by using these techniques and rDNA technology provides opportunities in RD and health care departments.
4	IV	Biostatistics and Bioinformatics	5	The students will gain knowledge how to represent the research data statistically. Bioinformatics helps in data search and patent oppurtunities
5	V (A)	Plant Biotechnology	4	With the knowledge of biotechnology and tissue culture students will acquire skills for raising commercial important plants and

				endangered species. Also develop skills in food and fodder production.
6	V (B)	Medical biotechnology	4	Students will develop skills in development of health care products and get opportunities in R an D departments.
7	VI (A)	Environmental biotechnology	4	With the knowledge of environmental biotechnology the students can able to address the issues of climate change.
8	VI (B)	Animal biotechnology	4	Animal biotechnology provides opportunities to address issues of food security which is going to be a global challenge in upcoming decades.