

S. No.	Programme	Programme Outcomes	Programme Specific Outcomes
1.	1. B.A. (EPP) Economics Public Administrations Political Science	Outcome of the Programme is to give Students for multi Disciplinary approach that helps them build their social Analytical Skills and in Pursuing Multi Tasking Courses and Professions there are all expected outcomes of the programme.	1. A traditional combination suitable for students from urban and rural background. 2. Provides ample opportunities based on the choice of the student and their interest. 3. A special emphasis on the learning process involves relating to the National and International development with a sound theoretical background. 4. Students with this course can go for higher education towards development studies that are restructured. 5. The courses allow BA graduates to pursue higher education - Law, Rights and Constitutional Governance, Gender Studies, Development Studies, Disaster Management Education, Social Work, School of Livelihoods and Development, Rural Development.
2.	2. B.A. (EHP) Economics History Political Science		1. This course has high potential which enables a student to mold according to the career path / higher studies options at Indian Council for Historical Research, New Delhi, India / National Archives//Good Governance/Centre for Gender Studies and Development.
3.	3. B.A. (HPP) History Political Science Public Administrations		1. A student of HPP is well grounded in the fundamentals of the core subjects namely History, Political science & Public Administration. 2. Any decision related to perspectives on the milieu enables them to grasp the realities. 3. This is the most critical input and helps in facilitating a spectrum of opportunities in policy making. This course is basic to acquire internship in Conservation of Monuments, Indian National Trust for Art and Cultural Heritage (INTACH) and Society for the Promotion of Indian Classical Music And Culture Amongst Youth (SPICMACAY).

4.	4. B.A. (EHPA) Economics History Public Administrations	<ol style="list-style-type: none"> 1. A traditional combination suitable for students from urban and rural background. 2. Provides ample opportunities based on the choice of the student and their interest. 3. A special emphasis on the learning process involves relating to the National and International development with a sound theoretical background. 4. Students with this course can go for higher education towards development studies that are restructured. 5. The courses allow BA graduates to pursue higher education - Law, Rights and Constitutional Governance, Gender Studies, Development Studies, Disaster Management Education, Social Work, School of Livelihoods and Development, Rural Development. 6. This course has high potential which enables a student to mold according to the career path / higher studies options at Indian Council for Historical Research, New Delhi, India / National Archives//Good Governance/Centre for Gender Studies and Development.
----	---	---

Programme Outcomes, Programme Specific Outcomes

S.No	Programme	Programme Outcomes	Programme Specific Outcomes
1.	B.Sc. (MPCs.) Mathematics Physics Computer Science	1. Possess a sound understanding of the theoretical foundations of various core subjects. 2. Acquire analytical and logical thinking skills necessary to pursue higher education. 3. Gain employment at entry level positions based on program curriculum.	Master a broad set of knowledge concerning the fundamentals in the basic areas of Physics and Mathematics added with the necessary hands-on experience in various practical aspects of problem solving/programming/ experimentation. The program imparts students with an understanding of the basics of Computer Science, to develop proficiency in the practice of computing, and to prepare them for continued professional development.
2.	B.Sc. (MPC) Mathematics Physics Chemistry		The combination integrating all Basic Science courses lays a strong foundation and prepares the learner for Post Graduation research in respective disciplines.

Programme Outcomes, Programme Specific Outcomes

S.No	Programme	Programme Outcomes	Programme Specific Outcomes
1.	B.Sc. (BZC) Botany Zoology Chemistry	Expertise in the basic sciences provides the students with opportunities to go for Higher Education and also employment opportunities in industries, diagnostics, quality control and research.	Master fundamental skills to function effectively as professionals and continue learning within the field of Biology Provides an understanding of an exploration of how animals have evolved, how they function, and the ways in which they interact with their environment. An awareness of the impact of chemistry on the environment, society, appraise role of green chemistry in environment sustainability.

General English (CBCS)

COURSE OUTCOME:

General English (CBCS) I BA, BCom, BSc, BBA Semester I & II Text book: English for Enhanced Competence
Edited by Sumita Roy, A.Karunakar, K.Aruna Priya

To enhance language through a task-based & learner – centric syllabus

To familiarize with various aspects of our new state of Telengana

To carry out LSRW skills

To channelize energy through soft skills and Value orientation

To help them to learn good English to prosper in professional and personal lives

To make them proficient in English for global competency

General English (CBCS) II BA, BCom, BSc Semester III & IV Text book:

COURSE OUTCOME :

English for Enhanced Competence Edited by A.Karunakar, K.Aruna Priya

To learn the use rather than usage of English.

To develop their critical thinking capabilities focused through the course as an important need.

To expose to a range of contexts where the language is used to meet a variety of real life communication needs.

To equip with the practical, emotional, intellectual and creative aspects of language by integrating knowledge and skills.

To focus on readability, teach-ability and testability - to think beyond the text.

The students can successfully pass the semester 3 exam at the undergraduate level by the Osmania University.

To enhance practice in objective and subjective writing.

To make them aware of British and American Vocabulary.

DEPARTMENT OF HISTORY
KNM GOVERNMENT DEGREE COLLEGE
MIRYALAGUDA

COURSE OUTCOMES:

S. No.	Semester	Course	Credits	Course Outcomes
1	I	History of India (From Earliest Times to c.700 CE)	5	<ul style="list-style-type: none"> ➤ It provides a base for understanding the Indian history. ➤ Helps the student to understand the history of early India from the prehistoric times to the age of the Mauryas. ➤ Emphasizes on the factors and forces behind the rise, growth and spread of civilization and culture of India along with the dynastic history. ➤ 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	<ul style="list-style-type: none"> ➤ Students will come to know consequences of the foreign invasions, particularly on the polity, society, economy and art and architecture. ➤ 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	<p>It provides the knowledge to understand the following</p> <ul style="list-style-type: none"> ➤ Establishment of Mughal Dynasty ➤ Rise of Regional Powers - Marathas, Sikhs. ➤ Rise of Princely States – Hyderabad – Avad - Junagarh – Mysore – Kashmir. ➤ Advent of European Powers ➤ Decline of Rural Cottage Industries and Urban Handicrafts ➤ 1857 Revolt – Nature, Causes and Results.
4	IV	History of India (1858-1964 CE)	5	<p>It provides the knowledge to understand the following</p> <ul style="list-style-type: none"> ➤ Queen's Proclamation ➤ Socio-Religious Reform Movements ➤ Factors for the Rise of Nationalism ➤ Revolutionary Movement ➤ Emergence of Communal Politics ➤ 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 thefollowing ➤ Decline of Medieval Socio-Political, Religious, Economicconditions ➤ Rise ofCapitalism
6	V Paper - VI	History and Culture of Telangana (From earliest times to 1724 CE)		It provides the knowledge to understand thefollowing ➤ Pre-History ofTelangana ➤ Brief Political Survey of Satavahanas, Ikshvakus, Vishnukundins, Medieval Telangana from Kakatiyas to QutbShahis.
7	VI Paper-VII	History of the Modern World (From 1815to 1950 CE)	5	➤ To understand the contemporary world in the light of its backgroundHistory. ➤ To become conversant with political history of ModernWorld. ➤ To provide knowledge about the main developments in the Contemporary World (To understand to important development in 20th centuryWorld.) ➤ To gain knowledge about world concepts. ➤ 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 recenttimes. ➤ To impart the students with growth of various political movements thatshaped the modern world. ➤ To bring to light the rise and growth of nationalism as a movement in different parts of theworld.
8	VI Paper-VIII	History and Culture of Telangana (1724 - 2014 CE)	5	➤ Foundation of AsafJahiDynasty ➤ Political Developments in Hyderabad State 1900 to1942 ➤ Anti-Nizam and Anti-Feudal Movements ➤ December 2009 Declaration and the Formation of Telangana State,June 2014.

DEPARTMENT OF POLITICAL SCIENCE
KNM GOVERNMENT DEGREE COLLEGE
MIRYALAGUDA

COURSE OUTCOMES:

S. No.	Paper	Credits	Course Outcomes
1	Concepts and Theories of Political Science & Political Theory	5	<ul style="list-style-type: none"> ➤ Explaining the approaches to the Political Science. ➤ Assessing the theories of state.(Origin, nature, functions) ➤ Concept of state sovereignty. ➤ Understanding basic concepts of liberty, equality, rights, law and justice. ➤ Analyzing Marx's concept of freedom, democracy and revolutions.
2	Government and Politics in India	5	<ul style="list-style-type: none"> ➤ Introducing the Indian Constitution ➤ Examining the fundamental rights and duties of Indian citizens with a study of the signification and status of directive principles ➤ Analyzing the important institution of Indian Union:- President, Prime Minister, Council of Ministers, Governor, Chief Minister, Legislature and Judiciary. ➤ Critically evaluating the Indian party system. Evaluating the role of various forces on Indian politics. ➤ Evaluating electoral process in India with focus on the election commission.
3	Western Political Thought	5	<ul style="list-style-type: none"> ➤ Ancient Greek political thought on Aristotle and Plato. ➤ Examining the features of medieval political thought of reformation and Machiavelli. ➤ Critically examining Bodin theory of sovereignty, Hobbes, Locke, Rousseau. ➤ Examining the Bentham's utilitarianism and J.S.Mill views on liberty and Hegel's views on civil society and Non Marxist socialism.
4	Indian Political Thought and Moments	5	<ul style="list-style-type: none"> ➤ Tracing evaluation of Indian Political Thought from ancient India to modern India. ➤ Analyzing nationalist thoughts of Raja Ram Mohan Roy, Vivekananda and Tagore. ➤ Discussing the nationalism of Gandhi, M.N.Roy, Narendra Deva and Syed Ahmed Khan.

5	International Relations	5	<ul style="list-style-type: none">➤ Explaining the scope and subject matter of international relations as an autonomous academic discipline.➤ Examining the issues under development, terrorism, regionalism and integration that characterize the post second world war order.➤ Explaining globalization in contemporary world order.➤ Examining Indian foreign policy and working of UN and its organs. Peace keeping function and human rights.
---	-------------------------	---	---

PUBLIC

ADMINISTRATION

PUBLIC ADMINISTRATION 1 : Basics of public administration

1. To Understand meaning nature, scope and importance of public administration.
- 2 . To understand the Origin and evolution of public administration
3. To Understand Public relation with other social sciences
- 4 . To understand the oriental approach
- 5 . To Understand the Classical theories of public administration
6. To understand the human relations theories by various thinkers
7. To understand Socio- psychological approaches by various thinkers
8. To Understand the comparative public administration and development administration
9. To understand the scientific management approach

PUBLIC ADMINISTRATION 2 : Development Dynamics and Emerging trends

1. To understand administration in various societies.
2. To understand public choice approach, New public management of public administration
3. Understand the Concepts like public Policy, New public Management of public administration
4. Understanding the concepts LPG and Good Governance

PUBLIC ADMINISTRATION 3:

1. To understand the historical evolution of the Indian Administration and the constitutional framework.

2. Analyze the role of President, Prime minister, Council of ministers , Central Secretariat
3. To understand Centre–state administrative relations, and all India services
4. To understand the role of UPSC, Election commission, Comptroller and auditor general and NITI Aayog in Indian Administration
5. Understanding the Role of public enterprises in Indian administration

PUBLIC ADMINISTRATION 4:State Administration and Emerging

1. To understand Administrative history of state
2. To understand the role of Governor, Chief minister, Council of Ministers, GAD.
3. understanding District Administration and Democratic decentralization
4. Understand the Centre state agencies of police administration and its reforms.
5. Understanding Control over Administration. Transparency, Accountability and Right To Information Act. Legislative and Judicial control over Administration.

PUBLIC ADMINISTRATION 5 : Human Resource Management

1. Understanding the Nature, Scope, Importance of Human resource Management and Human resource planning
2. Understanding the concepts of office Management, Compensation Management
3. Understand Human resource development, training, performance appraisal and Total quality Management.
4. Understand Employee Grievances, Voluntary retirement, Outsourcing and Consultancies and Skill development.

PUBLIC ADMINISTRATION:6 . 508/A Rural Local Governance

1. Understanding the evolution of local organizations and democratic decentralization. Recommendations of Balwanth Rai Mehtha and Ashok Mehtha
2. Understanding the 73rd amendment act and role of Panchayats
3. Understanding the structure of panchayat Raj and its finances
4. Understanding and analyzing the rural development programs, role of Cooperatives for rural development.

5. Understand Basic services welfare measures in rural areas, and State control over Rural Local Government

PUBLIC ADMINISTRATION 7: Financial and

Material Resource Management

1. Understanding the Meaning, Nature, Scope and Importance of Financial Management.
2. Understanding the concepts, principles, preparation, Enactment of Budget
3. Understand the structure of Finance ministry and functioning of different parliamentary Committees.
4. Understanding the Concepts of material management, procurement, inventory Storage.

PUBLIC ADMINISTRATION : 8. 608/A:Urban local governance

1. Understanding the evolution of Urban Local bodies with reference to 74th amendment act.
2. Understanding and analyzing the rural development Strategies, issues and Finances.
3. Understanding the urban development authorities and the services and welfare measures in Urban areas
4. Understanding District Planning committee and Special Agencies for urban development.
5. Understand , Voluntary agencies in rural development and Elimination of poverty Initiatives in Rural and Urban Areas

ECONOMICS

ECONOMICS 1: Micro Economics

1. Understands the Economic behavior and methodology of micro economics.
2. Analyses the Consumer behavior and his preferences based on his utility.

3. Understand Market Demand and factors affecting price and demand.
4. Understands objectives of a business firm and nature of Production.
5. To understand the Concept of price income and substitution
6. To understand production analysis . concepts of short run pay, long run pay production
7. To understand cost and revenue , total cost ,total fixed cost, total variable cost; Total revenue average revenue marginal revenue. Revenue and Cost of a firm and its equilibrium.
8. To understand market structure monopoly, duopoly, and oligopoly markets Know the types of Markets and its price determination under different time period.
9. To understand business firm, profit and pricing strategies. factors of production and its characteristics and pricing

ECONOMICS 2: Macro Economics

1. To understand scope and importance of macro economics. concept of circular Flow of incomes.
2. Examines the behavior of the Economy as whole and Understands different methods for the measurement of national income.
3. the study of Classical and Keynesian theories of employment and unemployment makes to understand the increasing and decreasing of money supply and demand
4. It shows capital preservation remains a real priority for most investors and student understand how the investor decides his investment portfolio will be overweight
5. Understands the fluctuations in business cycles and causes of inflation. measures to control inflation.

ECONOMICS 3: Quantitative methods for economic analysis

1. Enables the student about the development of means of carrying out transactions involving the study of physical money such as coins and paper money. This study makes the student how to apply it, including the idea that an increase in the money supply leads to inflation in the long run relationship between inflation, the money supply, real output, and prices
2. Understand concepts of statistics, population and sample, frequency, . Methods of collecting Data. Census and smoking methods

3. Understands the methods of central Tendency and Dispersion. Absolute and Relative measures of Dispersion
4. Understand Correlation Regression. Karl persons correlation, Co-efficient. Spearman's Rank Correlation , concept of Regression
5. After studying this the student would be able to Describe the Index number and Time series Analysis

ECONOMICS 4: Public Finance and International Economics

1. Student to understand the Public Revenue, Public finance and Taxes system in various countries
2. Understands effects of public expenditure on economic growth by using various growth model, and Public expenditure and Public debt.
3. To understanding about Indian tax system, public expenditure, public debt system, Indian federal finance system, Centre-state financial relations ,Indian Budget system
4. Understands about International trade , Exports and Imports system in India
5. To understand about Balance of payments , Exchange rates. Equilibrium and Disequilibrium in Balance of payments

ECONOMICS :5. Indian Economy

1. To understand Basic structure and features of Indian Economy ,Population policy in India . Development of social economic infrastructure, Education and Health
2. To understand National Income , Poverty and Unemployment in India
3. Understands the Agriculture sector developments and policies followed by the Govt. Agriculture reforms, Green revolution
4. Makes to analyze the Growth and development of industrial policy and contribution to Indian Economy.Industrial policies of 1948,1956,and 1991. Analyses the Growing Importance of Service sector in Indian Economy
5. To understand about Planning and Public policy in India. Review of 5 years plans, NITI Aayog. Economic reforms of L.,P.,G. impact of GATT,WTO on Indian Economy.

ECONOMICS: 6 (A) Economics of Development and Planning

1. Makes to understand the importance of Economic Development and Growth.

2. Understands the Determinants of Economic Development. Economic factors of Property rights, National income, Population, Education, Health, Urbanisation, Migration, political factors
3. To understand the theories of Economic Development. Nurkse's, Hirschman's, Lewis, Rodan, theories.
4. Understands the Concept, Objectives, Process, Types of Planning
5. Understand, Planning for under Developed Countries. Objectives of Economics Development- Social, Cultural, Religious, Market condition factors

ECONOMICS : 7 . TELANGANA ECONOMY

1. Understand about Economic History of Telangana, Demographic features of Telangana.
2. To understand about, Gross Domestic Product, Poverty and Unemployment in Telangana. Poverty Alleviation, Employment generation, other Welfare Programs in Telangana.
3. Understanding about, Growth of Agriculture in Telangana Economy- Agriculture productivity, Cropping pattern, Land reforms, Irrigation sources of Mission Kakathiya.
4. To understand about Telangana Industrial policy, SEZ, SSI's, MSME. Industrial finance systems.
5. Understand about Service and Industrial sector Development in Telangana: Transport, Energy, Communication and Information technology, Science and, Bank and Insurance, Tourism Development in Telangana.

ECONOMICS: 8 (C) Economics of Rural development

1. To understand about Nature, scope, and importance of Rural development
2. Role of NGO's, Agriculture, Allied sector, Non Agriculture sector in Rural development
3. To understand about Measurements of Rural Development, Some measures of Rural poverty.
4. Understand about Some Paradigms of Rural development. Rodan's theory, Leibenstein's thesis, Myrdal's thesis, Gandhian Model of Rural development.
5. Understand about, Approaches to Rural development programmes. CDP, IADP, SFDA, MFALA, DPAP, DDP, IRDP, DWACRA, SGSY, SHG's.

B.Sc [MATHEMATICS] Program Outcomes:

- Apply a broad range of core mathematical knowledge and techniques , including advanced calculus, linear algebra, Geometry, Differential equations.
- Apply scientific experiments and research methods to continuously build on existing knowledge with modern and innovative ideas.
- Utilize mathematical knowledge and IT skills to design , implement and enhance computer programs.
- Function of multidisciplinary teams.
- Analyse statistical data to identify and solve applied scientific problems.
- Understand professional and ethical responsibility.
- Communicate mathematical knowledge directly and indirectly with precision, clarity and organization.
- Formulate mathematical models to solve real – life problems in a contemporary global and societal context.
- Utilize modern techniques and skills obtained to achieve pre-determined goals and improve overall performance in a professional set up.

Program objectives:

The Department of Mathematics seeks to provide quality education aimed at preparing high calibre professionals capable of achieving success and contributing to the development of the country in line with an ever-changing world. The Mathematics program is designed to achieve the following programme objectives

- Provide students with definitions of fundamental concepts and the major theorems of the core areas of undergraduate Mathematics.
- Develop student's ability to construct mathematical proofs.
- Train the students to analyse and interpret statistical data related to real-life problems.
- Train students to formulate and evaluate the feasibility of a problem solving strategy.
- Develop student's ability to communicate mathematical/statistical results in written and oral forms.
- Train students to design and implement algorithms for solving real-life problems.

COURSE OUTCOMES

I – YEAR

SEMESTER-I [PAPER-I]

Course Title: DIFFERENTIAL AND INTEGRAL CALCULUS

On completion of this course the students will be able to:

- Define ordinary and partial differential equation
- Understand Euler's theorem for homogeneous function of two variable
- To find maxima and minima , critical points and inflection points of Function of two variables
- To able to evaluate integrals of rational functions by partial fractions
- Evaluate the volume of solids using cross sections
- Determine solutions to angle of intersection of two curves
- Understand the basic knowledge of Circle, radius and Centre of Curvature
- Calculate the length of an arc of a curve when whose equations are given in parametric and polar form
- Evaluate the area of surfaces of revolution.

SEMESTER – II PAPER-II
Course Title : Differential equations

Upon completion of this course, students should be able to:

- Define differential equation and understand the order , degree of the differential equation
- differential equation Solve first order differential equation and utilizing standard techniques of a separable , exact and linear homogeneous equations
- Find complete solution of non-homogeneous differential equations as linear combination of complementary function and particular solution
- Students will have a working knowledge of basic application problems described by second order linear differential equations with constant coefficient
- Identify different types of differential equations and solve them
- Solve the partial differential equations using lagrange's method
- Solve the second order linear differential equations using method of variation of parameter
- Define Cauchy-Euler equation and solve them
- Students will have a working knowledge of Legendre's linear equations

II - YEAR
SEMESTER – III [PAPER-III]
COURSE TITLE: Real Analysis

On successful completion of the course, Students will be able to:

- Explain the basic idea of rational and real numbers
- Describe the terms limit and limit points of a set and explains closed and open sets
- Explain the idea about sequences and monotone property
- Acquire the basic knowledge of convergence and divergence
- Use the knowledge of convergence into problems
- Demonstrate an understanding of limits and how they are used in sequences, series
- Apply various theorems on the existence of limits of sequences and their evaluation
- Use the definitions of convergence as they apply to sequences
- Apply the knowledge of convergence to problems and the various theorems on convergence, absolute convergence and non-absolute convergence
- Explain Continuity and Discontinuity of various functions in different contexts
- Differentiate Uniform continuity from continuity and related theorems
- Understand the meaning of derivative of a function
- Acquire skill in applying the various techniques of differentiation and applications
- Understand theorems associated with differentiability
- Gain knowledge of L' Hospital Rule and evaluation of limits
- Expand functions using Taylor Series
- Understand partitions and their refinement
- Understand Integrability and theorems on integrability
- Acquire the idea about Riemann Integrability and Riemann Integration
- Understand various theorems associated with Riemann Integration
- Develop a knowledge about Riemann Integration and applies into problems
- Determine the Riemann integrability and the Riemann-Stieltjes integrability of a bounded function and prove a selection of theorems concerning integration.

SEMESTER – IV [PAPER-IV]

COURSE TITLE: ABSTRACT ALGEBRA

After completing the course students are expected to be able to :

- Demonstrate understanding of and the ability to verify relationships between operations satisfying various properties (e.g. commutative property)
- Demonstrate understanding of and the ability to work within various algebraic structures
- Acquire the basic knowledge and the structure of Group, Subgroup and Cyclic Groups
- Explain the significance of the notion of a normal subgroup, and of a simple group
- Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups
- Use Lagrange's Theorem to analyze the cyclic subgroups of a group
- Acquire the notion of permutations and operations on them
- Prove Cayley's theorem and understand its applications
- Explain the terms isomorphism and homomorphism
- Develop an idea about Isomorphism, homomorphism and automorphism
- Understand homomorphism, inner automorphism and their properties
- Understand Cayley's theorem and its applications
- Describe the characteristics of a ring, quotient rings and ideals
- Understand Quotient Rings, Ideals and their existence with examples
- Differentiate between Ring Ideals and Quotient Rings and also their properties
- Familiarize with Rings, Integral Domains, Fields and Divisors of Zero
- Familiarize with the concepts of Ideals and factor rings and homomorphisms and factor rings
- Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings (including polynomial rings and modular rings)
- Demonstrate understanding of the relationships between abstract algebraic structures with familiar numbers systems such as the integers and real numbers

III-YEAR
SEMESTER-V [PAPER-V]

COURSE TITLE: LINEAR ALGEBRA

Upon completion of this course, students should be able to :

- Analyze the solution set of a system linear equations.
- Do elementary matrix operations.
- Express a system of linear equations in a matrix form.
Do the elementary Row operations for the matrices and systems of linear equations.
- Recognize echelon forms
- Define a vector space and subspace
- Explain properties of R^n and Subspaces of R^n
Determine whether a subset of a vector space is linear dependent or linear independent.
- Describe the concept of a basis for a vector space.
- Represent linear transformations by matrices.
- Discuss spanning sets for vectors in R^n
- Define the dimension of a vector space
- Define the rank of a linear transformation
- Define row space and column space of a matrix
- Explain the relationship between the row space and column space of a matrix
Discuss the kernel and image of a linear transformation in terms of nullity and rank of the matrix
- Describe the concepts of eigenvalue, eigenvector and characteristic polynomial.
- Use eigenspaces of matrices , when possible, to diagonalize a matrix
- Perform diagonalization of matrices
- Define the norm, Orthogonality and orthogonal bases , orthogonal complements of vectors
Explain how orthogonal projections relate to least square approximations

SEMESTER-V [PAPER – VI (A)]

COURSE TITLE: ANALYTICAL SOLID GEOMETRY

Upon successful completion of this course students will be able to :

- Find centre and radius of Sphere and Circles.
- Find family of spheres passing through a circle, tangent planes and normal lines to a sphere.
- Obtain equation of cone, enveloping cone , cylinder, right circular cylinder , enveloping cylinder and prove their results.
- Find equation of tangent plane, reciprocal cone of given cone.
- Identify different conicoids and sketch them
- Understand relationship between different coordinate systems and plot the curve in spherical, cylindrical ,polar coordinates.
- Find the area of triangles, quadrilaterals and circles and shapes based on these.

SEMESTER-VI [PAPER – VII]

COURSE TITLE: NUMERICAL ANALYSIS

After completing the course students are expected to be able to :

- The theoretical and practical aspects of the use of numerical analysis.
- Solve an algebraic or transcendental equation using an appropriate numerical method
- Approximate a function using an appropriate numerical method
- Evaluate a derivative at a value using an approximate numerical method
- Proficient in implementing numerical methods for a variety of multidisciplinary applications.
- To establish the limitations, advantages and disadvantages of numerical analysis.
- To derive numerical methods for various mathematical operations and tasks, such as interpolation , differentiation, integration , the solution of linear and non- linear equations and the solution of differential equations.
- To understand of common numerical analysis and how they are used to obtain approximate solution to otherwise intractable mathematical problems.

SEMESTER-VI [PAPER – VIII(A)]

COURSE TITLE: VECTOR CALCULUS

After completing the course students are expected to be able to:

- Define vector equations for lines and planes
- Compute limits or derivatives of functions of two and three variables
- Analyze vector functions to find limits, derivatives and integrals
- Determine gradient vector fields and find potential function
- Apply fundamental theorem of line integral, surface integrals and volume integrals to evaluate integrals
- Compute partial derivatives , derivatives of vector valued function and gradient functions
- Calculate directional derivatives and gradient
- Explain the concept of conservative vector field and describes applications to physics.

**KNM GOVERNMENT DEGREE COLLEGE,
MIRYALAGUDA.**

Course Outcomes

DEPARTMENT OF TELUGU

Semester I and II

- To inculcate respect to mother tongue in general and Telugu in specific among the students.
- To educate the students about Telangana history, culture, language and literature
- To inculcate human values , women empowerment and to improve imagination power among the students.
- To give a perfect outlook about classical, neoclassical, modern, post-modern trends in Telugu literature.
- To motivate to write poetry, stories, literary essays etc.
- To expose the students to the structural aspects, of the language through grammar

Semester III and IV

- To enlighten the students about the writers of the Telangana region who have been neglected in the past.
- To inculcate moral values and spiritual outlook through literature.
- To expose the students to literature created for the upheaval of the suppressed classes, especially Dalits.
- To explain the glory of the Telangana by texts related to the heroes of Telangana, history of the region and cultural uniqueness of Telangana
- To educate the students about the ill effects of modern culture
- To inculcate passion for reading

To introduce the beauty of prosody in the language in order to make them write poetry metrically