



K.L.E. Society's

G. I. Bagewadi Arts, Science and Commerce College, Nipani-591237

Accredited at 'A' level by NAAC with CGPA 3.10

Affiliated to Rani Channamma University, Belagavi, Karnataka, India

Website: www.klegibnnpn.edu.in

☎: (08338) 220116

E-mai:lklegib_npn@yahoo.co.in

M.Sc. Mathematics

Programme Outcomes ,Programme Specific Outcomes and Course Outcomes for 2023-2024

- **Programme Outcomes**

PO1	Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.
PO2	Formulate and develop mathematical arguments in a logical manner.
PO3	Acquire good knowledge and understanding in advanced areas of mathematics chosen by the student from the given courses.
PO4	Understand, formulate and use quantitative models arising in social science, business and other contexts.
PO 5	Developed scientific outlook not only with respect to science subjects but also in all aspects related to life.

- **Programme Specific Outcomes**

PSO1	Helps students to solve the problems in Physics, Chemistry and Computer Science .
PSO2	Students are able to formulate and develop mathematical arguments in a logical manner.
PSO3	Apply the underlying unifying structures of mathematics (i.e. sets, relations and functions, logical structure) and the relationships among them.
PSO4	Demonstrate basic manipulative skills in algebra, geometry, trigonometry, and beginning calculus.
PSO5	Investigate and apply mathematical problems and solutions in a variety of contexts related to science, technology, business and industry, and illustrate these solutions using symbolic, numeric, or graphical methods.

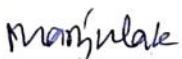
Course Outcomes M.Sc. Mathematics


Class	Paper	Course Outcome	
M.Sc. I. Sem.	A410010 : Algebra -I	CO1	Understand definition of group, verify group properties in particular examples and carry out the calculations of cyclic groups.
		CO2	Use the properties of homomorphism and isomorphism to prove groups are isomorphic.
		CO3	Understand the connection of Normal subgroup and structure of permutation group on Lagrange's theorem and determine automorphism groups.
	A410020: Topology	CO1	Define basics of topology, continuity, homeomorphism of topological spaces, topologically equivalent spaces.
		CO2:	Define compact, connected, point compact and properties.
		CO3	Metric spaces and examples, metric topology, metrizable. Prove Uryson's lemma, Tychonoff Theorem, Tietze's Lemma.
	A410030: Real Analysis	CO1	Define axioms of real numbers, Cauchy-Schwarz inequality, countable and uncountable sets, different properties of \mathbb{R} .
		CO2:	Euclidean space \mathbb{R}^n , topological properties of \mathbb{R}^n , Bolzano-Weierstrass Theorem, The Cantor intersection theorem, Lindelöf covering theorem, Heine-Borel covering theorem.
		CO3	Metric space. Point Set Topology in Metric space, compact Subset of a metric space, Sequences, Subsequences, Convergent and Cauchy Sequences in a metric space
	A410040: Linear Algebra	CO1	Understand real vector space, subspaces and apply their properties, Basis and dimension of vector space and understand the change of basis.
		CO2	Compute linear transformations, kernel, and range inverse of linear transformation.
		CO3	Find Eigen values and eigenvectors and use them in applications. Diagonalization and orthogonality of symmetric matrices.
	A410050: Ordinary Differential Equations	CO1	Classify the ODE & PDE solving non homogeneous ordinary differential equations by various methods.
		CO2	Able to obtain the Normalized differential equation Adjoint equations self adjoint differential equation Existence of initial value problem and uniqueness.
		CO3	Understand Sturm comparison, Sturm-Liouville's problem theorem Eigenvalue problems, Orthogonality of Eigen functions, Classify the ordinary and singularity point of differential equations and standard differential equations.
		CO2	Define basic assumption of binary codes, blocked codes Define

	Mathematical Structure		encoding ,decoding .
		CO3	Define basic properties of graphs, sub graphs. Analyze the blocks and trees and connectivity, planarity and Euler's formula, apply the characterization theorem
M.Sc.- II Sem.	B410010: Algebra -II	CO1	Distinguish given set is ring or field or integral domain, or ideal, splitting field.
		CO2	Define quotient ring, polynomial ring and applications
	B410020: Complex Analysis	CO1	Explain the fundamental concepts of complex analysis and their role in modern mathematics.
		CO2	Define Bilinear transformation, cross ratio, fixed point. Write the bilinear transformation which maps real line to real line, unit circle to unit circle, real line to unit circle. riemann Mapping Theorem.
	B410030: Partial Differential Equations	CO1	Classify the PDE & able to solve first order PDE Charpits method to solve non linear differential equation by different methods.
		CO2	Able to understand Origin of second order partial differential equations, their classification and derivation of wave eq" and others
		CO3	Laplace equation, boundary value problems Maximum Problem for a circle, uniqueness and continuity theorem, Dirichlet problem for a circular annulus, Neumann problem for a circle.
	B410040: Real Analysis II	CO1	Define Functions of several variables, Directional derivative, Notion of differentiability, Total derivative.
		CO2	Evaluate Jacobian, Chain rule and Mean value theorems. Interchange of the order of differentiation.
		CO3	Define Laplacian. Cylindrical and spherical co-ordinates, Line integrals, surface integrals, Theorem of Green, Gauss and Stokes.
	B410050: Classical Mechanics	CO1	Define Coordinate transformations, Cartesian tensors, Basic Properties of tensors.
		CO2	Define Continuum Hypothesis, Configuration of a continuum, Mass and density and Deformation of a surface element.
		CO3	Deformation of a volume element, Isochoric deformation, Stretch and Principal strains.
		CO4	Describe Applications in Fundamental basic physical laws and Equations of fluid mechanics.
M.Sc.- III Sem.	C410010: Measure Theory & Lebesgue Integration	CO1	Define basic definitions and derive Algebra of measurable functions. Egoroff's theorem. Lebesgue integral of bounded function over a set of finite measure.
		CO2	State and prove Bounded Convergence theorem, Fatou's Lemma. General Lebesgue integral. Lebesgue's Monotone convergence theorem.
		CO3	Derive Lebesgue General (Dominated) convergence theorem, Differential of an integral, L_p -Spaces. Completeness of L_p -Space. Product measure, Fubini theorems, Radon-Nikodym theorem

M.Sc.- III Sem.	C410020: Differential Geometry	CO1	Define surface and their properties, express parameterization of surface, tangent space of surface.
		CO2	Define the equivalence of two curves, find the derivative map of an isometry, analyse the equivalence of two curves by applying some theorems.
		CO3	Explain differential maps between surface and first derivative of such maps.
		CO4	Integrate differential forms of on surface. Understand computational techniques special curves in surfaces.
	C410030: Numerical Analysis	CO1	Solve find Numerical solutions of ODE's, by prescribed methods and able to verify the numerical answer with analytical answer of ODE then they will analyze the importance of numerical analysis.
		CO2	Solve the non - homogeneous system of linear equations by different methods and applications in engineering.
		CO3	Understand the Thomas algorithms,, tridiagonal system of equations and finding Eigen values and Eigen vectors of symmetric metrics by numerical method.
		CO4	Solve linear PDE by Finite difference method by both Explicit & implicit methods. And other standard theorems.
	C410040: Combinatori al Network Theory	CO1	Gain knowledge about Network Theory ,Network optimization,,Transportation Problems and Network Flow.
		CO2	Learning how graph theory is applicable in Network System.
		CO3	Students will understand the applications such as fault Tollerance , Traffic signals and Computer Networks .
	C410050: Number Theory and Cryptology	CO1	Solve problems in elementary number theory.
		CO2	Apply elementary number theory to cryptography.
		CO3	Develop a deeper conceptual understanding of the theoretical basis of number theory and cryptography.
M.Sc.- IV Sem.	D410010:Fu nctional Analysis	CO1	Appreciate how functional analysis uses and unifies ideas from vector spaces, the theory of matrices and complex analysis.
		CO2	Understand and apply fundamental theorems from the theory of normed and Banach spaces, including the Hahn Banach
		CO3	Understand and apply ideas from the theory of Hilbert spaces to other areas.
	D410120:B anach Algebra	CO1	Understand of the principles of the Banach Algebra and complex Banach Algebra.
		CO2	Learning how theory of Banach Algebras can be applied to areas such as mathematical methods ,Topology and Fourier series.
		CO3	Learning how to approach operator theory from Banach Algebra Perspective.
		CO4	Gain the knowledge about Ideals , maximal ideals and Gelfand Transform.
	D410020:M athematical Methods	CO1	Applications of Laplace transforms to solve ODEs and PDEs . Volterra and Fredholm integral equations.
		CO2	Asymptotic expansion of functions, power series as asymptotic

M.Sc.- IV Sem.			series, Asymptotic forms for large and small variables
		CO3	Laplace's method and Watson's lemma, method of stationary phase and steepest descent.
		CO4	Problems involving Boundary layers. Poincare - Lindstedt method for periodic solution
	D410040: Advanced Numerical Analysis	CO1	Demonstrate competence with and understanding of numerical algorithm and computer programming
		CO2	Compute numerically the derivatives and integrals
		CO3	Solve linear system of equations numerically using direct methods.
		CO4	Solve non linear system of equations using point method, Newton's method, and Quasi Newton method.
		CO5	Gain experience in computer programming and independent project
	D410030: Advanced Graph theory	CO1	Illustrate different types of graph theory. Explain independent sets and covering sets and some basic theorems.
		CO2	Explain connectedness and components and some theorems. Characterize tree.
		CO3	Derive some properties of planarity and Euler's formula. Find chromatic number and chromatic polynomials for graphs.
		CO4	Explain basic properties of permutation graphs, domination parameters
	Project	CO1	By preparing projects on different topics beyond the curriculum students get an idea about research.
		CO2	They come to know about computer skills.
		CO3	Methodology of preparing thesis


Head
 Department of Mathematics
 K.L.E's G. I. B. College, Nipani


IQAC Co-ordinator
 K.L.E's G. I. B. College, Nipani.


PRINCIPAL
 K.L.E. Society's
 G.I. Bagewadi College, Nipani.



K.L.E. Society's
G. I. Bagewadi Arts, Science and Commerce College, Nipani-591237

Accredited at 'A' level by NAAC with CGPA 3.10

(Affiliated to Rani Channamma University, Belagavi, Karnataka, India)

Website: www.klegibnnpn.edu.in E-mail: klegib_npn@yahoo.co.in Ph.: 08338-220116

Department of Mathematics

PROGRAM OUTCOMES:

- 1. Disciplinary Knowledge:** Bachelor degree in Mathematics is the culmination of in-depth knowledge of Algebra, Calculus, Geometry, differential equations and several other branches of pure and applied mathematics. This also leads to study the related areas such as computer science and other allied subjects.
- 2. Communication Skills:** Ability to communicate various mathematical concepts effectively using examples and their geometrical visualization. The skills and knowledge gained in this program will lead to the proficiency in analytical reasoning which can be used for modelling and solving of real-life problems.
- 3. Critical thinking and analytical reasoning:** The students undergoing this programme acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real life problems.
- 4. Problem Solving:** The Mathematical knowledge gained by the students through this programme develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions. This programme enhances students overall development and also equip them with mathematical modelling ability, problem solving skills.
- 5. Research related skills:** The completing this programme develop the capability of inquiring about appropriate questions relating to the Mathematical concepts in different areas of Mathematics.
- 6. Information/digital Literacy:** The completion of this programme will enable the learner to use appropriate software's to solve system of algebraic equation and differential equations.
- 7. Self-directed learning:** The student completing this program will develop an ability of working independently and to make an in-depth study of various notions of Mathematics.
- 8. Moral and ethical awareness/reasoning:** The student completing this program will develop an ability to identify unethical behavior such as fabrication, falsification or misinterpretation of data and adopting objectives, unbiased and truthful actions in all aspects of life in general and Mathematical studies in particular.

9. Lifelong learning: This programme provides self-directed learning and lifelong learning skills. This programme helps the learner to think independently and develop algorithms and computational skills for solving real word problems.

10. Ability to peruse advanced studies and research in pure and applied Mathematical sciences.

Course Outcomes

Course Code	Course Title	Course Outcomes
Course Code: 21BSC1C1MAT 1L	Course Title: Algebra - I and Calculus – I	<p>This course will enable the students to</p> <ul style="list-style-type: none"> • Learn to solve system of linear equations. • Solve the system of homogeneous and non-homogeneous linear of m equations in n variables by using concept of rank of matrix, finding eigen values and eigen vectors. • Sketch curves in Cartesian, polar and pedal equations • Students will be familiar with the techniques of integration and differentiation of function with real variables. • Identify and apply the intermediate value theorems and L' Hospital rule.
Course Code: 21BSC1C1MAT 1P	Course Title: Practical's on Algebra - I and Calculus – I	<p>This course will enable the students to</p> <ul style="list-style-type: none"> • Learn Free and Open Source Software (FOSS) tools for computer programming • Solve problem on algebra and calculus theory studied in MATDSCT 1.1 by using FOSS software. • Acquire knowledge of applications of algebra and calculus through FOSS Practical/Lab Work to be performed in Computer Lab (FOSS) • Suggested Software's:Maxima/Scilab/Maple/MatLab/Mathematica/Python
Course Code: 21BSC1C1MAT 1L	Course Title: Algebra - II and Calculus –II	<p>This course will enable the students to</p> <ul style="list-style-type: none"> • Recognize the mathematical objects called Groups. • Link the fundamental concepts of groups and symmetries of geometrical objects. • Explain the significance of the notions of Cosets, normal subgroups and factor groups. • Understand the concept of differentiation and fundamental theorems in differentiation and various rules. • Find the extreme values of functions of two variables.
Course Code: 21BSC1C1MAT 1P	Course Title: Practical's on Algebra - II and Calculus – II	<p>This course will enable the students to</p> <ul style="list-style-type: none"> • Learn Free and Open Source Software (FOSS) tools for computer programming • Solve problem on algebra and calculus by using FOSS software's. • Acquire knowledge of applications of algebra and calculus through FOSS Practical/Lab Work to be performed in Computer Lab Suggested Software's: Maxima/Scilab/Maple/MatLab/Mathematica/Python/R.
Course Code: 21BSC3C3MAT 1L	Course Title: Ordinary Differential	<p>Course Learning Outcomes: This course will enable the students to: Solve first-order non-linear differential equations and linear differential equations.</p>

	Equations and Real Analysis – I	<ul style="list-style-type: none"> • To model problems in nature using Ordinary Differential Equations. • Formulate differential equations for various mathematical models • Apply these techniques to solve and analyze various mathematical models. • Understand the fundamental properties of the real numbers that lead to define sequence and series, the formal development of real analysis. • Learn the concept of Convergence and Divergence of a sequence. • Able to handle and understand limits and their use in sequences, series, differentiation, and integration. • Apply the ratio, root, alternating series, and limit comparison tests for convergence and absolute convergence of an infinite series.
Course Code: 21BSC3C3MAT 1P	Course Title: Practicals on Ordinary Differential Equations and Real Analysis – I	<p>Course Learning Outcomes: This course will enable the students to gain hands-on experience of</p> <ul style="list-style-type: none"> • Free and Open Source software (FOSS) tools or computer programming. • Solving exact differential equations • Plotting orthogonal trajectories • Finding complementary function and particular integral of linear and homogeneous differential equations. • Acquire knowledge of applications of real analysis and differential equations. • Verification of convergence/divergence of different types of series
Course Code: 21BSC4C4MAT 2L	Course Title: Partial Differential Equations and Integral Transforms	<p>Course Learning Outcomes: This course will enable the students to</p> <ul style="list-style-type: none"> • Solve the Partial Differential Equations of the first order and second order • Formulate, classify and transform partial differential equations into canonical form. • Solve linear and non-linear partial differential equations using various methods; and apply these methods to solving some physical problems. • Able to take more courses on wave equation, heat equation, and Laplace equation. • Solve PDE by Laplace Transforms and Fourier Transforms
Course Code: 21BSC4C4MAT 2P	Course Title: Practical's on Partial Differential Equations and	<p>Course Learning Outcomes: This course will enable the students to</p> <ul style="list-style-type: none"> • Learn Free and Open Source software (FOSS) tools or computer programming. • Solve problems on Partial Differential Equations and

	Integral Transforms	<p>Integral Forms</p> <ul style="list-style-type: none"> • To find Laplace transform of various functions • To find the Fourier Transform of periodic functions • To solve differential equations by using Integral transforms
Course Code: 21BSC5C5MAT MJ1L	Course Title: 5.1 Real Analysis-II and Complex Analysis	<p>Course Learning Outcomes: The overall expectation from this course is that the student builds a basic understanding on Riemann integration and elementary complex analysis. The broader course outcomes are listed as follow. At the end of this course, the student will be able to:</p> <ul style="list-style-type: none"> • Carry out certain computations such as computing upper and lower Riemann sums as well integrals. • Describe various criteria for Integrability of functions. • Exhibit certain properties of mathematical objects such as integrable functions, analytic functions, harmonic functions and soon. • Prove some statements related to Riemann integration as well as in complex analysis. • Carry out the existing algorithms to construct mathematical structures such as analytic functions. Applies the gained knowledge to solve various other problems.
Course Code: 21BSC5C5MAT MJ1P	Course Title: 5.1 Practical's on Real Analysis-II and Complex Analysis	<p>Course Learning Outcomes: This course will enable the students to:</p> <ul style="list-style-type: none"> • Learn Free and Open-Source Software (FOSS) tools for computer programming. • Solve problem on Real Analysis and Complex Analysis studied in MAT DSCT 5.1 by using FOSS software's. • Acquire knowledge of applications of Real Analysis and Complex Analysis through FOSS.
Course Code: 21BSC5C5MAT MJ2L	Course Title: 5.2 Vector Calculus and Analytical Geometry	<p>Course Learning Outcomes: This course will enable the students to:</p> <ul style="list-style-type: none"> • Get introduced to the fundamentals of vector differential and integral calculus. • Get familiar with the various differential operators and their properties. • Get acquainted with the various techniques of vector integration. • Learn the applications of vector calculus. • Recollect the fundamentals of Analytical Geometry in 3D. • Interpret the geometrical aspects of planes and lines in 3D.
Course Code: 21BSC5C5MAT	Course Title: 5.2 Practical's	<p>Course Learning Outcomes: This course will enable the students to:</p>

MJ2P	on Analytical Geometry and Vector Calculus	<ul style="list-style-type: none"> • Learn Free and Open-Source Software (FOSS) tools for computer programming. • Solve problem on Analytical Geometry and Vector Calculus studied in MAT DSCT 5.2 by using FOSS software's.
Course Code: 21BSC6C6MAT MJ1L	Course Title: 6.1Linear Algebra	<p>Course Learning Outcomes: The overall expectation from this course is that the student will build a basic understanding in few areas of linear algebra such as vectors spaces, linear transformations. Some broader course outcomes are listed as follows. At the end of this course, the student will be able to</p> <ul style="list-style-type: none"> • Understand the concepts of Vector spaces, subspaces, bases dimension and their properties. • Become familiar with the concepts of Eigen values and Eigen vectors, linear transformations etc. • Prove various statements in the context of vectors spaces.
Course Code: 21BSC6C6MAT MJ1P	6.1Practical's on Linear Algebra	<p>Course Learning Outcomes: This course will enable the students to:</p> <ul style="list-style-type: none"> • Learn Free and Open-Source Software (FOSS) tools for computer programming. • Solve problem on Linear Algebra studied in MAT DSCT 6.1 by using FOSS softwares. • Acquire knowledge of applications of Linear Algebra through FOSS.
Course Code: 21BSC6C6MAT MJ2L	Course Title: 6.2Numerical Analysis	<p>Course Learning Outcomes: The overall expectation from this course is that the student will get equipped with certain numerical techniques for various computations such as finding roots, finding the integrals and derivatives, and finding solutions to differential equations. Some broader course outcomes are listed as follows. At the end of this course, the student will be able to</p> <ul style="list-style-type: none"> • Describe various operators arising in numerical analysis such as difference operators, shift operators and so on. • Articulate the rationale behind various techniques of numerical analysis such as in finding roots, integrals and derivatives. • Reproduce the existing algorithms for various tasks as mentioned previously in numerical analysis. • Apply the rules of calculus and other areas of mathematics in justifying the techniques of numerical analysis. • Solve problems using suitable numerical technique. • Appreciate the profound applicability of techniques of numerical analysis in solving real life problems and also appreciate the way the techniques are modified to improve the accuracy.
Course Code: 21BSC6C6MAT MJ2P	Course Title: 6.2 Practical's on Numerical	<p>Course Learning Outcomes: This course will enable the students to:</p> <ul style="list-style-type: none"> • Learn Free and Open-Source Software(FOSS) tools for

	Analysis	. computer programming. • Solve problem on numerical Analysis studied in MAT DSC T 6.2 by using FOSS software's. Acquire knowledge of applications of numerical Analysis through FOSS
--	----------	--

Manjula
 Head
 Department of Mathematics
 K.L.E's G. I. B. College, Nipani


 IQAC Co-ordinator
 K.L.E's G. I. B. College, Nipani.


 PRINCIPAL
 K.L.E. Society's
 G. I. Bagewadi College, Nipani.



K.L.E. Society's
G.I. Bagewadi Arts, Science and Commerce College, Nipani-591237

Accredited at 'A' level by NAAC with CGPA 3.35

(Affiliated to Rani Channamma University, Belagavi, Karnataka, India)

Website: www.klegibnnpn.edu.in E-mail: klegib_npn@yahoo.co.in Ph.: 08338-220116

DEPARTMENT OF COMMERCE

M.COM

Program Outcomes, Program Specific Outcomes and Course Outcomes (PO, PSO, CO)

For the Year 2023-24

PROGRAM OUTCOMES:

PO1: Impart the students with higher level knowledge and understanding of contemporary trends in commerce and business finance

PO2: Prepare the students for an in depth analysis of investment, portfolio management, investment banking and liquidation of investments

PO3: Provide guidance to students to plan and undertake independent research in chosen discipline

PO4: Train the students on teamwork, lifelong learning and continuous professional development

PO5: Facilitate the students to apply capital budgeting techniques for investment decisions .

PROGRAM SPECIFIC OUTCOMES:

PSO1: To attain Eligibility for joining research

PSO2: To attain Eligibility for applying examinations like SET, NET etc.

PSO3: To attain Eligibility for joining professional courses in teaching

PSO4: Students attain Eligibility for applying KPSC, UPSC and other recruitment board examinations

PSO5: Students have opportunity for joining professional courses like CA/ICWA/CS etc.



COURSE OUTCOMES of M.com.

Semester	Course Code & Name	Outcomes	
MCom I Sem.	HC-1.1 Advanced Corporate Strategic Management	CO1	To understand the framework across strategic analysis, strategy formulation and strategic implementation
		CO2	To study the environmental analysis and diagnosis with models
		CO3	To know the formulation of strategy and its choice
		CO4	To study the relationship between formulation and implementation of strategy
		CO5	To understand the techniques of strategic evaluation and control
MCom I Sem.	H C-1.2 Advanced Marketing Management	CO1	To familiarize the students with the fundamentals of marketing including marketers' perspectives
		CO2	To make the students understand the concepts of product design
		CO3	To know the implications of distribution & channel integration decisions
		CO4	Enabling the students to understand the ROLR OF Pramotion in Marketing.
		CO5	To understand the implications of current trends in online marketing
MCom I Sem.	HC-1.3 Financial Management	CO1	To acquaint the students with various methods and techniques of financial management
		CO2	Understand and analyze the capital structure and its approaches
		CO3	Students can understand evaluation of capital budgeting approaches
		CO4	Students can acquire knowledge about dividend decisions in practice with various models
		CO5	Calculation of working capital requirement and components of working capital.
MCom I Sem.	HC-1.4 Applied Economics for Business	CO1	The basic understanding of managerial economics. An insight into the fundamental concepts of economics.
		CO2	Able to understand of various approaches of consumer behavior and derivation of demand accordingly.
		CO3	Able to understand and discussed the probable outcomes of concept of Production & functional relationship. Specific laws related to behavior of production, externalities.



		CO4	Able to understand the probable outcomes of concept of Costs & their functional relationship specific laws related to behavior of cost functions with simple problems.
		CO5	Able to understand and discussed the probable outcomes of various forms of market and their operations with regard to determination of price, output and existing real market. Able to understand the probable outcomes of various trade cycles such as depression prosperity, peak and recession.
MCom I Sem.	SC-1.5 (AA) Managerial Accounting	CO1	Understanding about the concept of management and tools and techniques of it.
		CO2	Gain knowledge about marginal costing and break-even analysis.
		CO3	Understanding different methods of financial analysis and interpretation tools and different types of ratios.
		CO4	Acquire knowledge about preparation of fund flow statement and cash flow statement.
		CO5	Understand the techniques of uniform costing and inter firm comparison.
MCom I Sem.	SC-1.6 (AF) Stock Market Operations	CO1	To understand the overview of Securities Market.
		CO2	Acquire knowledge about primary market and process of issue in primary market.
		CO3	Enable the students to understand trading in stock exchange.
		CO4	To understand the depository services and credit rating agencies in India.
		CO5	To equip the students with conceptual framework of international stock market.
MCom II Sem.	HC-2.1 Corporate Restructuring	CO1	To understand significant motives of Corporate restructuring
		CO2	To understand the basic issues of mergers and acquisitions
		CO3	To understand the implementation of merger and acquisition
		CO4	To understand the SEBI takeover code
		CO5	To understand the working measures for control of industrial sequence
MCom II Sem.	HC-2.2 Quantitative Techniques	CO1	Understand the uses of quantitative techniques in business and industry
		CO2	Gain knowledge to optimize the objectives with limited resources by using Linear Programming Problem.
		CO3	Understand the optimum methods to reduce the transportation costs and optimum assignment of salesman.
		CO4	It explains planning, sequencing and scheduling the various activities to complete the job or project using PERT & CPM
		CO5	To acquire knowledge about decision making under different environments
MCom II Sem.	HC-2.3 Dynamics	CO1	Understand the concept of entrepreneurship development
		CO2	To acquire knowledge about entrepreneurial creativity and



	of Entrepreneurship Development		innovation
		CO3	To understand the initiating ventures
		CO4	Students can acquire knowledge about different business plans for new ventures
		CO5	To learn about entrepreneurship
MCom II Sem.	HC-2.4 Advanced Corporate Accounting	CO1	To create awareness about accounting practices relating to various issues of corporate accounting
		CO2	To acquire knowledge about preparation of final accounts
		CO3	Valuation of different methods of goodwill and shares
		CO4	To understand the accounting treatment in internal and external reconstruction
		CO5	Preparation of consolidated financial statements in case of holding companies
MCom II Sem.	SC-2.6 (AF) Accounting for Specialized Institutions	CO1	Learn the concept of insurance and provisions relating to final accounts.
		CO2	Acquire knowledge about preparation of final accounts of electricity companies.
		CO3	Students can understand legal provisions of banking companies relating to final accounts
		CO4	Students can acquire knowledge about preparation of final accounts of hotel undertakings
		CO5	Students can acquire knowledge about preparation of final accounts of hospital undertakings
MCom III Sem.	HC-3.1 Business Research Methodology	CO1	Understand the concepts of business research
		CO2	Acquire knowledge about methods of data collection and sampling
		CO3	To understand data processing and analysis
		CO4	To know the statistical applications
		CO5	To learn how to write business reports
MCom III Sem.	HC-3.2 International Financial Management	CO1	Understand the International Financial Management
		CO2	To understand in depth about Foreign Exchange Methods
		CO3	To evaluate Foreign Exchange Risk Management and Economic Exposure
		CO4	To design global financing strategy.
		CO5	Determination of Capital budgeting and working capital management of MNC's
MCom III Sem.	HC-3.3 Organizational Behavior	CO1	Understand the concepts of Organizational Behavior.
		CO2	Acquire knowledge about causes of human behaviour
		CO3	Understand theories and tools of motivation
		CO4	Helps students to develop their personality
		CO5	To understand Work life management



	nt	CO4	To evaluate portfolio construction
		CO5	Determination of different methods of portfolio revisions
MCom IV Sem.	SC-4.6 (AF) Advanced Financial Accounting	CO1	Top acquire knowledge about higher aspects of partnership accounts
		CO2	To understand about accounting for lease
		CO3	To learn about accounting for investment transactions
		CO4	Students get knowledge about accounting for intangible assets
		CO5	To understand the concept of accounting of Indian government
MCom IV Sem.	HC-4.5 Project and Field Visit	CO1	To formulate research problem statements
		CO2	Enabling the students to articulate hypothesis, objectives etc.
		CO3	To develop research design.
		CO4	To acquire knowledge about data collection, tabulation, analysis using various statistical tools
		CO5	To understand the art of research report writing.


Head
 Department of Commerce
 K.L.E's G. I. B. College, Nipani.




PRINCIPAL
 K.L.E. Society's
 G. I. Bagewadi College, Nipani



K.L.E. Society's
G.I. Bagewadi Arts, Science and Commerce College, Nipani-591237

Accredited at 'A' level by NAAC with CGPA 3.10

(Affiliated to Rani Channamma University, Belagavi, Karnataka, India)

Website: www.klegibnnpn.edu.in E-mail: klegib_npn@yahoo.co.in Ph.: 08338-220116

DEPARTMENT OF COMMERCE

B.COM

Program Outcomes, Program Specific Outcomes and Course Outcomes(PO, PSO, CO)

For the Year 2023-24

The PSOS and COS are the objectives of the university programs and course are stated in the syllabi which are available on the university website. Every program has its own learning outcomes of programs and courses. Every department is preparing teaching plans and learning out comes and they are displayed on the notice board and also on the college website.

Program Outcomes, Course Outcomes and their importance are communicated to

- Teachers in IQAC meeting and staff meeting.
- Students in orientation program and also in respective classes.
- Stake holders through college website.

Each department discusses these PSOs and COs in their department meeting as well before the commencement of each semester. The possible ease or difficulties in the attainment of these outcomes are also considered.

NAME OF THE PROGRAM	PROGRAM OUTCOMES
Bachelor of Commerce	<p>After completing three years program in Bachelors of Commerce, the students could achieve the following program outcomes</p> <ol style="list-style-type: none">1. After completing graduation students gain a thorough knowledge in the various aspects of business, trade and commerce.2. Students are eligible for appearing for various competitive examinations like Civil services examinations, Combined Defense Services examinations, KPSC, IBPS, Indian Railway Board or entering into the government services.3. Students apply the knowledge of accounting, mathematics, management and computer to the solution of complex accounting and management problems.4. Students apply ethical principles and commit to professional integrity, work responsibilities and norms of accounting and practices.5. Students exercise Professional skills, values, team spirit, and high leadership and to accept the challenges in the Industry and Academics.

NAME OF THE PROGRAM	PROGRAM SPECIFIC OUTCOMES
Bachelor of Commerce	<p>The students could possess the knowledge, skills and attitudes during their B.Com degree course. By virtue of the training and learning, they could become eligible job hunters in government and private sectors. Even they could become successful businessmen or self-employed in their career.</p> <ol style="list-style-type: none"> 1. An inclination towards lifelong learning and acquiring contemporary knowledge. 2. Students have a greater number of alternatives to pursue professional and traditional courses such as CA, CS, CWA, CMA, MBA, M.Com, B.Ed. etc. for academic progressions. 3. Students will be able to pursue their career in higher education, advance research and career specific programs in the field of commerce and finance. 4. Students will be able to get employment opportunities in functional areas like taxation, accounting, auditing, banking, BPOs, KPOs, insurance etc. 5. Students will acquire managerial skill like communication, decision making, problem solving etc in day to day business affairs. 6. Students will acquire theoretical and practical knowledge for performing various business activities. 7. Take independent decisions in economic and social aspects of life. 8. Acquire jobs in different sectors such as banking, industry, insurance companies, defense, CSO, NSSO, planning department etc. 9. Pursue post-graduation degree such as MBA, MSW and law degree. 10. Start own entrepreneurship.

COURSE OUTCOMES OF COMMERCE SUBJECTS

Semester	Course Code & Name	Outcomes	
B.COM I Sem.	A0210 Financial Accounting	CO1	Understand the theoretical framework of accounting as well accounting standards.
		CO2	Demonstrate the preparation of financial statement of manufacturing and non manufacturing entities of sole proprietors.
		CO3	Exercise the accounting treatments for consignment transactions & events in the books of consignor and consignee.
		CO4	Understand the accounting treatment for royalty transactions & articulate the Royalty agreements.
		CO5	Outline the emerging trends in the field of accounting.
B.COM I Sem.	A0220 Mgmt Principles and Applications	CO1	Understand and identify the different theories of organisations, which are relevant in the present context
		CO2	Design and demonstrate the strategic plan for the attainment of organisational goals.
		CO3	Differentiate the different types of authority and chose the best one in the present context.
		CO4	Compare and chose the different types of motivation factors and leadership styles.
		CO5	Choose the best controlling techniques for better productivity of an organisation.
B.COM I Sem.	A0230 Principles of Marketing	CO1	Understand the basic concepts of marketing and asses the marketing environment.
		CO2	Analyze the consumer behaviour in the present scenario and marketing segmentation.
		CO3	Discover the new product development & identify the factors affecting the price of a product in the present context.
		CO4	Judge the impact of promotional techniques on the customers & importance of channels of distribution.
		CO5	Outline the recent developments in the field of marketing.
OEC B.A & B.SC I Sem	19028 Accounting for Everyone	CO1	Analyse various terms used in accounting;
		CO2	Make accounting entries and prepare cash book and other accounts necessary while running a business;
		CO3	Prepare accounting equation of various business transactions;
		CO4	Analyse information from company's annual report;
		CO5	Comprehend the management reports of the company.

B.COM II Sem.	B020210 Advanced Financial Accounting-II	CO1	Learn various methods of accounting for hire purchase transactions.
		CO2	Deal with the inter-departmental transfers and their accounting treatment
		CO3	Demonstrate various accounting treatments for dependent & independent branches
		CO4	Prepare financial statements from incomplete records.
B.COM II Sem.	B020240 Corporate Administration	CO1	Understand the framework of Companies Act of 2013 and different kind of companies.
		CO2	Identify the stages and documents involved in the formation of companies in India.
		CO3	Analyse the role, responsibilities and functions of Key management Personnel in Corporate Administration.
		CO4	Examine the procedure involved in the corporate meeting and the role of company secretary in the meeting.
		CO5	Evaluate the role of liquidator in the process of winding up of the company.
B.COM II Sem.	B020230 Law and Practice of Banking	CO1	Summarize the relationship between Banker & customer and different types of functions of banker.
		CO2	Analyse the role, functions and duties of paying and collecting banker.
		CO3	Make use of the procedure involved in opening and operating different accounts.
		CO4	Examine the different types of negotiable instrument & their relevance in the present context.
		CO5	Estimate possible developments in the banking sector in the upcoming days.
B. A II Sem.	OEC Event Management	CO1	Develop their own career opportunity and build their life through event management activities.
		CO2	Train students in skills to plan, manage and implement various types of events.
		CO3	Gain confidence and enjoyment from involvement in the event management.
		CO4	Identify best practice in the development and delivery of successful conferences and corporate gatherings
		CO5	Obtain a sense of responsibility for the multi-disciplinary nature of event management.
B.COM III Sem.	B.Com 3.1 Corporate Accounting	CO1	Understand the treatment of underwriting of shares.
		CO2	Comprehend the computation of profit prior to incorporation.
		CO3	Know the valuation of intangible assets.
		CO4	Know the valuation of shares.
		CO5	Prepare the financial statements of companies as per companies act, 2013.

B.COM III Sem.	B.Com 3.2 Business Statistics	CO1	Familiarizes statistical data and descriptive statistics for business decision-making.
		CO2	Comprehend the measures of variation and measures of skewness.
		CO3	Demonstrate the use of probability and probability distributions in business.
		CO4	Validate the application of correlation and regression in business decisions.
		CO5	Show the use of index numbers in business.
B.COM III Sem.	B.Com 3.3 Cost Accounting	CO1	Understand concepts of cost accounting & Methods of Costing
		CO2	Outline the procedure and documentations involved in procurement of materials & compute the valuation of Inventory
		CO3	Make use of payroll procedures & compute idle and over time
		CO4	Discuss the methods of allocation, apportionment & absorption of overheads
		CO5	Prepare cost sheet & discuss cost allocation under ABC
SEC B.A III Sem	B.Com 3.4 Financial Education & Investment Awareness	CO1	Provide the foundations for financial decision making
		CO2	List out various saving and investment alternatives available for a common man
		CO3	Give a detailed overview of stock markets and stock selection.
		CO4	Orient the learners about mutual funds and the criteria for selection.
B.COM IV Sem.	B.Com. 4.1 Advanced Corporate Accounting	CO1	Know the procedure of redemption of preference shares.
		CO2	Comprehend the different methods of Mergers and Acquisition of Companies
		CO3	Understand the process of internal reconstruction.
		CO4	Prepare the liquidators final statement of accounts.
		CO5	Understand the recent developments in accounting and accounting standards.
B.COM IV Sem.	B.Com. 4.2 Costing Methods and Techniques	CO1	The method of costing applicable in different industries.
		CO2	Determination of cost by applying different methods of costing.
		CO3	Prepare flexible and cash budget with imaginary figures
		CO4	Analyze the processes involved in standard costing.
		CO5	Familiarize with the Activity Based Costing and its applications

B.COM IV Sem.	B.Com. 4.3 Business Regulatory Framework	CO1	Recognize the laws relating to Contracts and its application in business activities.
		CO2	Acquire knowledge on bailment and indemnification of goods in a contractual relationship and role of agents
		CO3	Comprehend the rules for Sale of Goods and rights and duties of a buyer and a seller.
		CO4	Distinguish the partnership laws, its applicability and relevance.
		CO5	Rephrase the cyber law in the present context
SEC B.SC IV Sem	Financial Education & Investment Awareness	CO1	Provide the foundations for financial decision making
		CO2	List out various saving and investment alternatives available for a common man
		CO3	Give a detailed overview of stock markets and stock selection.
		CO4	Orient the learners about mutual funds and the criteria for selection.
B.COM V Sem.	COM.5.1 Financial Management	CO1	Understand the role of financial managers effectively in an organization.
		CO2	Apply the compounding & discounting techniques for time value of money.
		CO3	Take investment decision with appropriate capital budgeting techniques for investment proposals.
		CO4	Understand the factors influencing the capital structure of an organization.
		CO5	Estimate the working capital requirement for the smooth running of the business
B.COM V Sem.	COM5.2 Income Tax Law and Practice-I	CO1	Comprehend the procedure for computation of Total Income and tax liability of an individual.
		CO2	Understand the provisions for determining the residential status of an Individual.
		CO3	Comprehend the meaning of Salary, Perquisites, and Profit in lieu of salary, allowances and various retirement benefits
		CO4	Compute the income house property for different categories of house property.
		CO5	Comprehend TDS & advances tax Ruling and identify the various deductions under section 80.
B.COM V Sem.	COM5.3 Principles and Practice of Auditing	CO1	Understand the conceptual framework of auditing.
		CO2	Examine the risk assessment and internal control in auditing
		CO3	Comprehend the relevance of IT in audit and audit sampling or testing.
		CO4	Examine the company audit and the procedure involved in the audit of different entities.
		CO5	Gain knowledge on different aspect of audit reporting and conceptual framework applicable on professional accountants.

B.COM V Sem.	COMH1 Human Resources Development	CO1	Understand the need of HRD.
		CO2	Comprehend the framework of HRD.
		CO3	Know the models for evaluating the HRD programs.
		CO4	Comprehend the need for employee counseling.
		CO5	Apprehend the HR performance.
B.COM V Sem.	COMM1 Retail Management	CO1	Understand the contemporary of retail management, issues, strategies and trends in Retailing.
		CO2	Utilize the theories and strategies of retail planning.
		CO3	Perceive the role and responsibilities of store manager and examine the visual merchandising and its techniques in the present context.
		CO4	Prioritize the factors to be considered while fixing the price in retailing.
		CO5	Comprehend the emerging trends in Retail Industry.
B.COM V Sem.	COM5.6 GST-Law & Practice	CO1	Comprehend the concepts of Goods and Services tax.
		CO2	Understand the fundamentals of GST.
		CO3	Analyse the GST Procedures in the Business.
		CO4	Know the GST Assessment and its computation.
B.COM VI Sem.	COM6.1 Advanced Financial Management	CO1	Understand and determine the overall cost of capital.
		CO2	Comprehend the different advanced capital budgeting techniques.
		CO3	Understand the importance of dividend decisions.
		CO4	Evaluate mergers and acquisition.
		CO5	Enable the ethical and governance issues in financial management.
B.COM VI Sem.	COM6.2 Income Tax Law & Practice– II	CO1	Understand the procedure or computation of income from business and other Profession.
		CO2	The provisions for determining the capital gains.
		CO3	Compute the income from other sources.
		CO4	Demonstrate the computation of total income of an Individual.
		CO5	Comprehend the assessment procedure and to know the power of income tax
B.COM VI Sem.	COM6.3 Management Accounting	CO1	Demonstrate the significance of management accounting in decision making.
		CO2	Analyze and interpret the corporate financial statements by using various techniques.
		CO3	Compare the financial performance of corporate through ratio analysis.
		CO4	Understand the latest provisions in preparing cash flow statement.
		CO5	Comprehend the significance of management audit and examine the corporate reports

B.COM VI Sem.	COMH2 Cultural Diversity at Work Place	CO1	Understand, interpret question reflect upon and engage with the notion of "diversity".
		CO2	Recall the cultural diversity at workplace in an organization.
		CO3	Support the business case for workforce diversity and inclusion.
		CO4	Identify diversity and work respecting cross cultural environment.
		CO5	Assess contemporary organizational strategies for managing workforce diversity and inclusion.
B.COM VI Sem.	COM.M2 Customer Relationship Management	CO1	To be aware of the customer relationship.
		CO2	To analyze the CRM link with the other aspects of marketing.
		CO3	To impart the basic knowledge of the Role of CRM in increasing the sales of the company.
		CO4	To make the students aware of the different CRM models in service industry.
		CO5	To make the students aware and analyze the different issues in CRM
B.COM VI Sem.	COM6.6 Assessment of Persons other than Individuals and Filing of ITRs	CO1	Understand the calculation of Depreciation and allowance
		CO2	Comprehend the assessment of partnership Firms and determine the tax liability.
		CO3	Comprehend the assessment of corporate entities and determine the tax liability.
		CO4	Equip with understanding of intensive knowledge on analysis of all forms of ITR
		CO5	Forms along with the Overview ITR Forms and e-filing.


Head
Department of Commerce
K.L.E's G. I. B. College, Nipani.




PRINCIPAL
K.L.E. Society's
G. I. Bagewadi College, Nipani.