S.G.V.V.T's

SRI GAVISIDDESHWAR ARTs, SCIENCE & COMMERCE COLLEGE, KOPPAL-583231

(Affiliated By Vijayanagara Srikrishna Devaraya University, Ballari)

Department of Mathematics:

STUDENTS LEARNING OUTCOMES IN MATHRMATICS

PROGRAM OUTCOME:

B.Sc Mathematics:

- Develop the mathematical thinking, Mathematical Logic which is very useful for solving mathematical reasoning problems.
- Ability to accurately organize, analyze and Interpret data.
- Gain exposure to a variety of areas of mathematics and related fields such as computer science, natural science, and business.
- Demonstrate basic manipulative skills in algebra, trigonometry and calculus.
- Understand and develop the value of Proofs, the single factor that distinguishes mathematics from all other disciplines.
- Communicate mathematical ideas both orally and writing.
- Ability to calculate and reason to design complex and critical models for Bank and Insurance companies.
- Ability to build up oneself in the field of engineering and technology. And a person can build up an application of maths in daily life.

DEPARTMENT OF MATHEMATICS :

COURSE OUTCOME

B.Sc I SEMESTER

Paper-I - Algebra-I

Paper-II – Calculus-I

- Explain and apply the basic notations of symbolic logic, exemplify truth value status of propositions.
- Develop a digital logic and apply it to solve real life problems.
- Use Computational techniques and algebraic skill essential for the study of system of linear equations, Eigen values, Eigen vectors and digonalization.
- Students will have the knowledge of solving the equations up to and including second degree equation and find the relationship between roots and co-efficient of general polynomial equation, Descarte's rule of signs, solutions to cubic and biquadratic equations.

B.Sc II SEMESTER

Paper-I - Algebra-II

Paper-II – Advanced Calculus-[calculus-II]

- Series are useful as a way of rational, exponential and trigonometric functions are used to solve series problems.
- Decide whether a given group is cyclic and finite cyclic group. Find a generator for a subgroup of a given order. The concept of group is central to abstract algebra. Other well-known algebraic concepts such as rings, fields, vector spaces can all be seen as group endowed with additional operations and axioms.
- Students are able to define and study limits of a sequence, convergence of series and students will be able to form a sequence and obtain the series corresponding to a sequence.
- Students will study the relation between beta and gamma functions.

B.Sc III SEMESTER

Paper-I –Linear algebra and Rings

Paper-II – Differential equations and Total differential equations.

- Students will Identify an ordinary differential equations and classify it by order or linearity.
- Recognize and solve linear, separable and exact first order differential equations.
- This course introduces the basic concept of rings and Linear algebra.
- Demonstrate accurate and efficient use of advanced algebraic techniques.
- Help to solve the problems on Linear equations and also help to find out the Total differential equations.

B.Sc IV SEMESTER

Paper-I –Complex and Real Analysis

Paper-II – Special functions and Partial differential equations.

- Legendre polynomials are used in multiple expansions, fluid dynamics and used to solve the problems in numerical analysis which develops to understand and give knowledge to apply the concepts of mathematics in physics.
- Developing the knowledge of application of derivatives and Integration in partial differential equations.
- Complex analysis is intended both for continuing students at high level in theoretical physics, Engineering and Information technology and mathematical economics.
- Students will have knowledge and skills to explain fundamental concepts of complex analysis and their role in modern mathematics and application in problem solving using complex analysis.
- To expose the students to the basics of real analysis and partial differential equations required for their subsequent course work.

B.Sc V SEMESTER

Paper-I –Integral Transforms

Paper-II – Vector Analysis and Partial differential equations.

Paper-III- Graph Theory

- Students will gain a range of techniques employing the Laplace and Fourier transforms in solutions of ordinary equations.
- The purpose of the course is to provide an understanding of basic relations of vector analysis and gradient of a function.

B.Sc VI SEMESTER

Paper-I – Trigonometry and Topology

Paper-II –Numerical Analysis

Paper-III –Graph Theory

- Students will have a strong background of Graph Theory which has diverse application in the areas of computer science, Biology, Chemistry, Physics.
- Students will have depth in Graph Theory. Will learn the fundamental of topology. Demonstrate such as open and closed sets, Interior, closure and the boundary.
- Student will have depth in Graph Theory. Will learn the fundamentals of topology. Demonstrate such as open and closed sets, Interior, closure and the boundary.
- Students will acquire an understanding of exponential, logarithmic, trigonometric, inverse trigonometric functions.
- Develop students Mathematical concepts, Improve logical thinking and knowledge.