

Janata Shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Mathematics

Course	Course Outcomes
B. Sc. III AY 2020-21 (CBCS)	
Mathematical Analysis	<ol style="list-style-type: none"> 1. The integration of bounded function on a closed and bounded interval. 2. Some of the families and properties of Riemann integrable functions. 3. The applications of the fundamental theorems of integration. 4. Extension of Riemann integral to the improper integrals when either the interval of integration is infinite or the integrand has infinite limits at a finite number of points on the interval of integration. 5. The expansion of functions in Fourier series and half range Fourier series.
Abstract Algebra	<ol style="list-style-type: none"> 1. Basic concepts of group and rings with examples. 2. Identify whether the given set with the compositions form Ring, Integral domain or field. 3. Understand the difference between the concepts Group and Ring. 4. Apply fundamental theorem, Isomorphism theorems of groups to prove these theorems for Ring. 5. Understand the concepts of polynomial rings, unique factorization domain.



Optimization Techniques	<ol style="list-style-type: none"> 1. Provide student basic knowledge of a range of operation research models and techniques, which can be applied to a variety of industrial and real life applications. 2. Formulate and apply suitable methods to solve problems. 3. Identify and select procedures for various sequencing, assignment, transportation problems. 4. Identify and select suitable methods for various games. 5. To apply linear programming and find algebraic solution to games.
Integral Transforms	<ol style="list-style-type: none"> 1. Understand concept of Laplace Transform. 2. Apply properties of Laplace Transform to solve differential equations. 3. Understand relation between Laplace and Fourier Transform. 4. Understand infinite and finite Fourier Transform. 5. Apply Fourier transform to solve real life problems.
Metric Spaces	<ol style="list-style-type: none"> 1. Acquire the knowledge of notion of metric space, open sets and closed sets. 2. Demonstrate the properties of continuous functions on metric spaces, 3. Apply the notion of metric space to continuous functions on metric spaces. 4. Understand the basic concepts of connectedness, completeness and compactness of metric spaces. 5. Appreciate a process of abstraction of limits and continuity to metric spaces.
Linear Algebra	<ol style="list-style-type: none"> 1. Understand notion of vector space, subspace, basis. 2. Understand concept of linear transformation and its application to real life situation. 3. Work out algebra of linear transformations. 4. Appreciate connection between linear transformation and matrices. 5. Work out eigen values, eigen vectors and its connection with real life situation.



Complex Analysis	<ol style="list-style-type: none"> 1. Learn basic concepts of functions of complex variable. 2. Be introduced to concept of analytic functions. 3. Learn concept of complex integration and basic results thereof. 4. Be introduced to concept of sequence and series of complex variable. 5. Learn to apply concept of residues to evaluate certain real integrals.
Discrete Mathematics	<ol style="list-style-type: none"> 1. Use classical notions of logic: implications, equivalence, negation, proof by contradiction, proof by induction, and quantifiers. 2. Apply notions in logic in other branches of Mathematics. 3. Know elementary algorithms: searching algorithms, sorting, greedy algorithms, and their complexity. 4. Apply concepts of graph and trees to tackle real situations. 5. Appreciate applications of shortest path algorithms in computer science.



[Handwritten Signature]

Head
 Department of Mathematics
 Kisan Veer Mahavidyalaya
 Wai - 412803