YashwantraoChavan College of Science, Karad
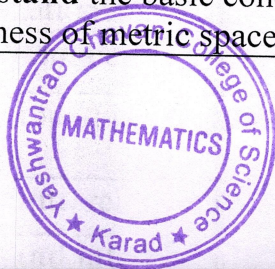# Department of Mathematics
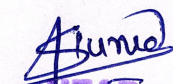
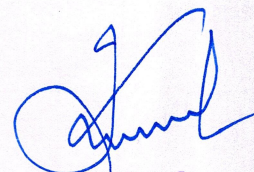| Course Outcomes (CO) as per Blooms' Taxonomy	
B. Sc. – III	
Course Name	**Course Outcome (CO)**
	Upon successful completion of the course, students will be able to:
Real Analysis	**CO1. Understand** the basic facts about functions and countability of sets
	CO2. Recognize bounded, convergent, divergent, Cauchy and monotonic sequences.
	CO3. Calculate limit superior, limit inferior, and the limit (when exists) of a sequence.
	CO4. Use different tests for convergence and absolute convergence of an infinite series of real numbers.
Modern Algebra	**CO1. Learn** Group structure and its properties.
	CO2. Learn Ring structure and its properties.
	CO3. Describe the difference between concepts Group and Ring.
Partial Differential Equations	**CO1. Understand** the basic concepts of partial differential equations (pdes) and their classification.
	CO2. Analyze and solve linear and some nonlinear partial differential equations using analytical methods.
	CO3. Apply critical thinking skills to select appropriate solution methods for different types ofpdes.
	CO4. Able to apply various solution techniques to solve linear partial differential equations of both first and second orders
Integral Transforms	**CO1. Understand** concept of Laplace Transform.
	CO2. Apply properties of Laplace Transform to solve differential equations.
	CO3. Understand relation between laplace and fourier transform.
	CO4.Understand infinite and finite Fourier Transform.
Metric Spaces	**CO1. Acquire** the knowledge of notion of metric space, open sets and closed sets.
	CO2. Demonstrate the properties of continuous functions on metric spaces.
	CO3. Apply the notion of metric space to continuous functions on metric spaces.
	CO4. Understand the basic concepts of connectedness, completeness and compactness of metric spaces.

Linear Algebra	**CO1. Understand** the fundamental concepts in linear algebra, enabling them to analyze and manipulate vector spaces, linear transformations.
	CO2. Relate matrices and linear transformations.
	CO3. Acquire skills to perform computations related to inner product and orthogonalization techniques.
	CO4. Compute Eigen values and Eigen vectors of linear transformations.
Complex Analysis	**CO1. Learn** basic concepts of functions of complex variable
	CO2. Be introduced to concept of analytic functions.
	CO3. Learn concept of complex integration and basic results thereof.
	CO4. Be introduced to concept of sequence and series of complex variable.
	CO5. Learn to apply concept of residues to evaluate certain real integrals
Operations Research	**CO1. Define** and explain the fundamental concepts of Operations Research.
	CO2. Identify and develop operations research model describing a real-life problem
	CO3. Understand the mathematical tools that are needed to solve various optimization problems.
	CO4. Solve various linear programming, transportation, assignment problems related to real life.

HEAD
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MATHEMATICS
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★ Karad ★

Principal
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