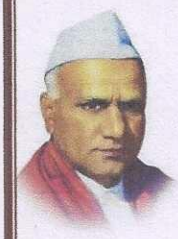

"Education for Knowledge, Science, and Culture"
- Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Autonomous)

KOLHAPUR (AUTONOMOUS)

Department Of Mathematics

Course Outcomes (COs)

B.Sc. Part III Mathematics (Introduced in the year 2020-21)	
Semester V	
Real Analysis (DSC-1003 E1)	
CO No.	**On completion of the course, student will be able to:**
CO1	Understand The characteristics of set of real number.
CO2	Learn Sequence and series of real numbers and their properties.
CO3	Use the ratio, root, alternating series and limit comparison test for convergence and absolute convergence of infinite series of real numbers
CO4	Learn Riemann Integral and Improper Integral.
Modern Algebra (DSC-1003 E1)	
CO No.	**On completion of the course, student will be able to:**
CO1	Understand an algebraic structures Group and ring.
CO2	Understand Properties and terminologies related to Group and Ring.
CO3	Understand Properties and terminologies related to Group and Ring. Apply fundamental theorem, Isomorphism theorems of groups to prove these theorems for Ring.
CO3	Recognize the mathematical objects that are group and classify them as abelian, cyclic and permutation group
Semester V	
Matrix Algebra (DSC-1003 E2)	
CO No.	**On completion of the course, student will be able to:**
CO1	Learn Terminologies related with matrices.
CO2	To solve system of homogeneous and non-homogeneous equations.
CO3	Calculate eigen values and corresponding eigen vectors of square matrix
CO4	Calculate the translation, dilation, rotation of point, line and plane by using matrices
Numerical Methods-I (DSC-1003 E2)	

CO No.	On completion of the course, student will be able to:
CO1	Use approximate numerical methods and determine the solutions to give non-linear equations.
CO2	Use appropriate numerical methods and determine approximate solutions to systems of linear equations and ordinary differential equations.
CO3	Learn numerical methods to calculate eigen value
CO4	Learn numerical method to find solution of system of equations
	Semester VI
Metric Space (DSC-1003 F1)	
CO No.	On completion of the course, student will be able to:
CO1	Learn Metric spaces and its different types.
CO2	Apply the notion of metric space to continuous functions on metric spaces
CO3	Demonstrate the properties of continuous function on metric space
CO4	Understand the basic concepts of connectedness, completeness and compactness of metric space
Linear Algebra (DSC-1003 F1)	
CO No.	On completion of the course, student will be able to:
CO1	Understand the concept of Vector spaces and operators on them.
CO2	Learn properties of Inner product spaces.
CO3	Learn basic concept of linear transformation, dimension theorem
CO4	Familiarize characteristic roots and characteristic vectors.
	Semester VI
Complex Analysis (DSC-1003 F2)	
CO No.	On completion of the course, student will be able to:
CO1	Familiarize with Basic concepts of functions of theory of functions of complex variable.
CO2	Learn Differentiation and Integration of complex valued functions.
CO3	Apply Cauchy integral formula to calculate integrals
CO4	Represent functions as Taylor, power and Laurent series, classify singularities and poles, find residues and evaluate complex integrals using the residue theorem.
Numerical Methods-II (DSC-1003 F2)	
CO No.	On completion of the course, student will be able to:
CO1	Use appropriate numerical methods to evaluate the integration
CO2	Demonstrate the use of interpolation methods to find intermediate values in given graphical and/or tabulated data for unequally spaced data

CO3	Demonstrate the use of interpolation methods to find intermediate values in given graphical and/or tabulated data for equally spaced data
CO4	Learn to find the solutions of ordinary differential equations by Euler, Taylor and Runga Kutta Method

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(S. P. Patankar)
HEAD
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