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

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur

(Empowered Autonomous)

KOLHAPUR

Department Of Mathematics

Course Outcomes (COs)

B.Sc. Part I Mathematics (Introduced in the year 2023)

Semester I

Differential Calculus (DSC03MAT11) (Major)

CO No.	On completion of the course, student will be able to:
CO1	Calculate the limit and examine the continuity of a function at a point.
CO2	Employ theorem on properties of continuity in various examples.
CO3	Understand the consequences of various mean value theorems for differentiable functions.
CO4	Understand Higher order derivatives, Taylor's theorem and indeterminate form

Basic Algebra And Complex Numbers (DSC03MAT12) (Major)

CO No.	On completion of the course, student will be able to:
CO1	Understand the importance of roots of real and complex polynomials and learn various methods of obtaining roots
CO2	Employ De Moivre's theorem in a number of applications to solve numerical problems
CO3	Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix, using rank
CO4	Find eigenvalues and corresponding eigenvectors for a square matrix.

Differential Calculus (MIN03MAT11)(Minor)

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Logical Reasoning (OEC03MAT11) (Open Elective)

CO No.	On completion of the course, student will be able to:
CO1	Understand the basic concepts of logical reasoning Skills
CO2	Understand basic concepts Integers, Rational and Irrational numbers.
CO3	Solve the problems on Clock Train and Calendar
CO4	Solve campus placements aptitude papers covering Quantitative Ability, Logical Reasoning Ability

Quantitative Aptitude (OEC03MAT12) (Open Elective)

CO No.	On completion of the course, student will be able to:
CO1	Understand the basic concepts of quantitative ability
CO2	Familiarize basic concepts of Permutation and Combinations.
CO3	Solve geometrical problems by using short-cut method
CO4	Compete in various competitive exams like CAT, CMAT, GATE, GRE, GATE, UPSC, GPSC etc.

Semester II

Differential Equations – I (DSC03MAT21) (Major)

CO No.	On completion of the course, student will be able to:
CO1	Learn various techniques of getting exact solutions of solvable first order differential equations and linear differential equations
CO2	Calculate P.I and C.F. of different types of differential equation
CO3	Solve differential equation of degree more than one.

CO4	Learn techniques of solving Clairaut's Equation.

Geometry (DSC03MAT22) (Major)

CO No.	On completion of the course, student will be able to:
CO1	Define the translation, rotation and understand relation between rotation and translation.
CO2	Estimate polar equation of circle, conic, chord, tangent.
CO3	Understand the various equation form sphere.
CO4	Learn various equation forms of cone.

Differential Equations – I (MIN03MAT21) (Minor)

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Quantitative analysis (OEC03MAT21) (Open Elective)

CO No.	On completion of the course, student will be able to:
CO1	Understand basic concepts Polynomials, Quadratic equations
CO2	Familiarize basic concepts of simple and compound interest.
CO3	Interpret the bar, pie, line chart
CO4	Analyse the problems on Heights, Distances and speed

Introduction to Applied Mathematics (OEC03MAT21) (Open Elective)

CO No.	On completion of the course, student will be able to:
CO1	Find determinant of second and third order matrices and inverse of matrix by

	adjoint method
CO2	Compute the addition and multiplication of matrices and inverse of matrix by adjoint method
CO3	Familiarize basic concept of set theory and recognize different types of functions
CO4	Learn to find feasible solution of linear programming problem.

Foundation of Mathematics (SEC03MAT29)

CO No.	On completion of the course, student will be able to:
CO1	Describe fundamentals of set theory, relations, functions, equivalence classes.
CO2	Apply techniques of proof to prove the statement in different ways.
CO3	Evaluate the images and inverse images of elements under functions.
CO4	Analyze statements logically and write it using quantifiers

(S. P. Thorat)
HEAD
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Vivekanand College, Kolhapur