

## Course outcome

### Mathematics

#### NEP

Upon successful completion of the course **MDC Math CC1** students will be able to

- Find out derivatives of functions and apply it to find approximation.
- Utilize approximate theory and computational techniques to construct Taylor series with its interval of convergence for use in variety of applications.
- Finding maxima and minima for functions of several variables.
- Derive area under a curve, volume, surface area of surface of revolution, length of curve.
- Derive equation of tangent, chord of contact, pole, polar of different conics.
- Make classification of conics.
- Know details about 2-D curves and 3-D surfaces.
- Apply vector addition, vector products to the problems of geometry, dynamics, and find various vector equations of the plane and straight line.
- Handle problem of vector differentiation, vector integration, limit and continuity with vector.

Upon successful completion of the course **MDC Math-CC2** students will be able to

- Determine the rank of a matrix and find solution of a system of equations.
- Find out the root of a polynomial equation.
- Make idea about the positions of the roots of a polynomial equation.
- Handle complex number arithmetic.
- Make idea on exponential, trigonometric and hyperbolic function of complex variable.
- Do some basic ideas on set, relation and mapping
- Make some basic ideas on inequalities of mathematical expressions.
- Know about different properties of integers and use these to solve problems that involve integers.
- Determine the existence and uniqueness of solution of a system of linear equation.
- Know about algebraic and geometric properties of vectors, geometry of linear combination and subset spanned by some vectors.