

ADU5302/APU3143 Mathematical Methods

Syllabus

- Laplace Transforms
- Laplace Transforms of Derivatives
- Laplace Transforms of Integrals
- Shifting on the t and s axes
- Differentiation and Integration of Laplace Transforms
- Inverse Laplace Transform
- Inverse Laplace Transforms of Derivatives and Integrals
- Convolution
- Applications Of Laplace Transforms: Solving Differential Equations
- Sturm-Liouville Problems
- Orthogonality of Characteristic Functions
- Expansion of a Function as a Series of Orthonormal Functions
- Trigonometric Fourier Series
- Trigonometric Fourier series II
- Fourier Sine Series and Fourier Cosine Series
- Convergence of Trigonometric Fourier Series
- Gamma Function
- The Beta Function
- Convergence of Trigonometric Fourier Series
- Differential Equations Reducible To The Bessel's Equation
- Legendre Function
- Fourier – Legendre and Fourier Bessel Series
- Chebyshev Polynomials
- Boundary Value Problems I
- Boundary Value Problems II