

MODULE SPECIFICATION	
Module title	Mathematics 4
Module code	Math 204
Phase	II
Credit rating	3
Pre-requisites	Mathematics (III)
Co-requisites	None

Course Contents

1-Laplace transformations to elementary functions, inverse Laplace of functions, Laplace transformations of derivatives and integrals, Solving ordinary differential equations using Laplace transform.

2-Fourier series, harmonic functions, Fourier integrals.

3-Special functions: gamma function, beta function, Legendre's polynomials, Hankel's and Bessel's functions.

4-Integral transformations (Fourier, Laplace)

Series solution of ordinary differential equations – Partial differential equations: one dimensional wave equation, separation of variables method, D'Alembert method.