

| Course Number | Course | Credit hours | Prerequisite |
|---------------|-----------------------------|--------------|--------------|
| 0302301 | Mathematical Physics (2) | 3 | 0302201 |

Fourier series and transforms, Dirichlet's conditions, Parseval's theorem. Ordinary differential equations (separable functions, first order and second order), Laplace transforms, Dirac delta function, Greens functions, Calculus of variations, Euler and Lagrange equations, Brachistochrones, isoperimetric problem. Special functions, factorial, gamma beta and error functions, elliptic integrals, series solution of differential equations, Legendre and Bessel orthogonal polynomials.