School of Mathematics

Course 231 1998-99
(SF Mathematics, SF Theoretical Physics, optional JS & SS Two-subject Moderatorship)

Lecturer: Professor Sen

Requirements/prerequisites: 131

Duration: 24 weeks

Number of lectures per week: 3

Assessment:

End-of-year Examination: One three hour examination, Professor Crane: 100%

Description:
Curvilinear Coordinates, Vector Analysis
Gauss and Stokes Theorem
Fourier Series and transforms
Potential Theory, Legendre polynomial
Associated Legendre function, Spherical Harmonic, Bessel function
Wave equation and diffusion equation, Green's function
Calculus of Variation

Computational methods, Numerical Integration of Boundary Value Problems (ODEs), Matrix methods for computing.

Objectives:
Introduction to basic techniques of applied mathematics, with application.

June 10, 1998

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