School of Mathematics

Course 2E1 — SF Engineering Pure Mathematics 1998-99
(SF Engineering & MSISS)

Lecturer: Professor T.T. West

Requirements/prerequisites: 1E1

Duration: 22 weeks excluding examining period.

Number of lectures per week: 3.5

Assessment:

End-of-year Examination: Two 1.5-hour examination in January and June

Description:
Laplace transforms
Vector valued functions
Motion in 3-d space
Tangent vectors
Curve lengths, 2-d areas
Integrals in polar co-ords
Partial differentation
Directional derivation
Grad, Div, Curl
Taylor expansions
Maxima & Minima
Multiple integrals in 3-d
Spherical & Cylindrical Co-ords
Green, Stokes & Divergence theorems
Eigenvalues, eigenvectors
Bases of $\mathbb{R}^n$, linear independence
Diagonalisation of matrices.

June 10, 1998