1 Lecturer: Dr. Shelton Peiris (Carslaw Room 819)

2 Objectives:
Establish some advanced methods of modelling and analysing of time series data. A particular attention is given to the theoretical development of various methods related to the following advanced topics:

3 Course Outline:
(ii) An Introduction to Spectral Analysis of Time Series.
(iii) Generalised AR and MA Models and Applications.
(iv) Analysis and Applications of Long Memory Time Series.
(vi) Autoregressive Conditional Duration, ACD Models.

4 Assumed Knowledge: STAT3903 or Equivalent

5 Method of Teaching and Learning:
Lectures: 2 lectures a week

Assessments:
3 Assignments - 15%
1 Technical Report* - 10%
November Examination - 75%

*Note: This report must include the analysis of a real time series (data set) using standard time series techniques. Application of a suitable computer package is essential in your report.

6 References:
(a) Time Series: Theory and Methods, BROCKWELL, P.J. & DAVIS, R.A.
(b) Time Series Analysis: Forecasting and Control, BOX, G.E.P. & JENKINS, G.M.
   (Holden-Day - 1976).
(e) Modelling Financial Time Series with SPlus, Zivot, E. and Wang, J.