Schedule of Material to be given out in [B.Sc./Grad. Dip.] Probability Models and Time Series; [MAS programmes] Stochastic Models and Time Series

Postgraduate Students: Jump directly to page 2!!!

AUTUMN TERM – weeks 7-10 – B.Sc./Grad. Dip. Candidates only.

*Week 7 – Thursday 14th November*
- Introductory Handout
- 1 – Stochastic Processes and Review of some Probability Theory
- Examples 1

*Week 8 – Thursday 21st November*
- 2 – Convergence results for sequences of random variables
- Examples 2
- Solutions 1

*Week 9 – Thursday 28th November*
- 3 – The Poisson Process
- Solutions 2

*Week 10 – Thursday 5th December*
- Examples 3
- Solutions 3
- PMTS Assignment A
SPRING TERM – All Candidates

Week 1 – Monday 6\textsuperscript{th} January
• Introductory Handout
• 1 – Markov Chains: Part I

Week 2 – Monday 13\textsuperscript{th} January
• 2 – Markov Chains: Part II
• Examples 1

Week 3 – Monday 20\textsuperscript{th} January
• 3 – Stationary processes and autocorrelations
• Examples 2

Week 4 – Monday 27\textsuperscript{th} January
• 4 – The properties of AR(1) and MA processes
• Solutions 1

Week 5 – Monday 3\textsuperscript{rd} February
• Examples 3
• Solutions 2
• SMTS Assignment 1/PMTS Assignment B

Week 6 – Monday 10\textsuperscript{th} February

NO LECTURES: IT’S READING WEEK!!!
**Week 7 – Monday 17th February**
- 5 – General autoregressive processes
- Solutions 3

**Week 8 – Monday 24th February**
- 6 – ARMA and ARIMA processes
- Examples 4

**Week 9 – Monday 3rd March**
- 7 – Fitting an ARIMA model
- Solutions 4

**Week 10 – Monday 10th March**
- 8 – Diagnostic checking and Introduction to Forecasting
- Examples 5

**Week 11 – Monday 17th March**
- 9 – Forecasting for ARIMA models
- Solutions 5
- Examples 6
- Solutions 6
- SMTS Assignment 2/PMTS Assignment C