M1S: PROBABILITY AND STATISTICS I

INTRODUCTION

This course is concerned with developing mathematical concepts and techniques for modelling and analyzing situations involving uncertainty.

No previous exposure to ideas of Probability or Statistics will be assumed.

Assessment of uncertainty in such real-life problems is a complex issue which requires a rigorous mathematical treatment. This course will develop the probability framework in which questions of practical interest can be posed and resolved.

Course Objectives

- to develop a mathematical framework in which to handle UNCERTAINTY and VARIABILITY

- to introduce the logic and mathematical properties of PROBABILITY

- to introduce techniques useful in probability calculations

- to identify specific modelling environments that correspond to common experimental situations

- to illustrate the use of probability in data analysis

Recommended Reading:

There are a large number of introductory texts on Probability and Statistics.

Particularly recommended for this course are:

Elementary Probability, by D. Stirzaker.

A First Course in Probability, by S. Ross.

Introduction to probability and mathematical statistics, by L. J. Bain and M. Engelhardt.

Course WWW page:

$$http://stats.ma.ic.ac.uk/{\sim}das01/M1S/$$

which will contain sketch lecture summaries, links to course handouts, and other links.

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