School of Mathematics

Course 151 — Introduction to Statistics 1998-99
(JF Mathematics, Two-subject Moderatorship)

Lecturer: Dr. E. Mullins (Statistics Department)

Requirements/prerequisites: None

Duration: 24 weeks

Number of lectures per week: 2 lectures and 1 tutorial per week

Assessment: Three take-home assignments and a short in-class exam carrying 20% of final grade (if it improves end of year examination mark)

End-of-year Examination: One 3-hour exam

Description: This course is an introduction to probability theory and statistical methods. The fundamental concepts are introduced in the context of a series of practical problems of varying complexity.

The topics covered will include: statistical variation, probability models for statistical data, random variables, probability distributions and their properties; sampling distributions, statistical estimation; comparative studies, contingency tables, simple linear regression, analysis of variance.

The theory will be illustrated by examples from biology, engineering, industry, medicine and the social sciences. The statistical computing package MINITAB will be used.

TEXTS:

1. Chatfield, C., *Statistics for Technologists*, 3rd edition, Chapman and Hall, London, 1983.
2. Ross, S.M., *Introduction to Probability and Statistics for Engineers and Scientists*, Wiley, 1987.

June 10, 1998