

STAT328/826: MARKET RESEARCH AND FORECASTING

2006 D2

Unit Information

PRE-REQUISITES: STAT270(C) or STAT271(C)

LECTURERS: Julian Leslie (Weeks 1 - 6) Module: Market Research
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Stephen Brown (Weeks 7 - 13) Module: Forecasting
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LECTURES: There will be a two-hour lecture **Tuesdays 1pm - 3 pm** in E6A102

PRACTICALS: There is a compulsory one hour practical **Tuesdays 3 pm – 4 pm** in the computer labs E4B118 using the package SPSS (and briefly, MINITAB).

TUTORIALS: There will be one tutorial per week. The sessions offered are Thursdays 3 pm in C4A325, 5 pm in W5C310, and 6 pm in W6B286. Attendance at the tutorial and the practical will be recorded. No solutions will be provided on the web or in ERIC but will be given at the tutorial. Attendance at tutorials and the on time submission of the student's own solutions to that tutorial's set of exercises is compulsory for STAT328 (not STAT826) students and **attracts 5 marks towards final mark** (max. mark possible is 105 for STAT328). At least 80% attendance and solution submission is required to obtain the full 5 marks. A solution will score 0, 0.5 or 1 depending on whether it is, respectively, an unsatisfactory, mediocre or reasonable attempt.

COURSE WORK: Each week, a set of tutorial exercises will be made available. There will be three assignments, each worth 5 marks towards the final grade for the course. They will be due in weeks 6, 8 (conjoint project) and 12 (forecasting). Assignments must be submitted by the due date, late assignments will not be accepted. Failure to submit assignments will result in automatic exclusion from the course.

ASSESSMENT: There will be two one-hour class tests, each contributing 10 marks. They will be held during the first hour of the lecture in week 6 (based on material in weeks 1 – 5) and week 11 (based on material in weeks 7 – 10). The final examination will be based on the whole semester's work with about half the questions from Market Research and half from Forecasting. The final examination will contribute at most 65 marks towards the overall mark. Note, maximum mark possible is 105 for STAT328 students (but this will be rescaled for the Standardized Numerical Grade reported in the official results). **Satisfactory performances in both the final exam and the coursework are essential for a passing grade.** For the **final** examination, you can bring

into the examination room one A4 page of notes written on both sides IN YOUR OWN HANDWRITING AND NOT PHOTO REDUCED. **NO SUCH SHEET IS PERMITTED IN THE FIRST MIDSEMESTER EXAM.**

Candidates **must** perform satisfactorily in **each** module to gain a passing grade.

TEXTBOOK: There is no set text for either module. Course notes will be provided for each lecture

STAT826 "Market Research and Forecasting" forming part of the Master of Commerce & M Int. Business Students: For students enrolled in STAT826 there will be extra course work in addition to the above. It will take the form of two special assignments, one given out at the end of Week 6 and the other in Week 10. They will each count at most 10 marks so your examination will be out of 120 and not 100 .

Schedule

Week1	Principal Component Analysis
Week2	Principal Component Analysis
Week3	Factor Analysis
Week4	Factor Analysis
Week5	Conjoint Analysis
Week6	Conjoint Analysis
Week7	Introduction to Time Series
Week8	ARIMA models
Week9	ARIMA models with seasonality
Week10	Dynamic Regression models and Intervention Analysis
Week11	Moving Averages and Exponential Smoothing
Week12	Periodicity

Books that have been found to be useful in the Market Research part of the course are the following (they have been placed in *Reserve* in the library).

Applied Multivariate Techniques by Subhash Sharma (QA278.S485 1996)
Applied Multivariate Methods for Data Analysts by Dallas E. Johnson (QA278.J615/1998).
Multivariate Statistical Methods by Bryan F. J. Manly (QA278.M35/2004)

There doesn't appear to be much available that is at the right level in Conjoint Analysis. Most treatments appearing in Market Research books are either too waffly or too technical. The supplied notes have quite a bit of detail and should be enough to get the idea of the method and to apply it.

For the Forecasting part of the course the following book has been found useful:

Forecasting: Methods and Applications by Makridakis, S (HD30.27.M34/1998)

Make sure all submitted work is your own work. There are serious penalties for plagiarism. If you are unclear as to what constitutes plagiarism see the document: *Plagiarism and how to avoid it* at the website www.student.mq.edu.au/plagiarism/