**STATS 747 Semester 2 2010**

**Statistics in Market Research**

**Lecture Times** 2 :00-3:30pm Mon & Wed

Location Room B09, Maths/Physics Building (303), City Campus

**Lecturer** Dr Andrew Balemi

*Rm 222 LEVEL 2* Maths/Physics Building (303), City Campus

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Office Hours: TBA

**Prerequisites** STATS 210 or equivalent. Some data analysis experience (as in

STATS 301) and knowledge of SAS or R/S-plus is expected.

**Corequisites** None.

**Recommended Reading** There are no texts available covering the full range of topics in this

course. Materials will be handed out and references made as and when appropriate.

**Assessment** There will be four assignments, with one due roughly every fortnight.

A project will be assigned, to be completed in two stages. This will be assessed through written reports and a presentation at the end of the course.

40% of the final grade will be based on assignments, 40% on the project, and 20% on the final exam.

Details of the assignments and project requirements will be distributed in lectures.

Assignments and written project work must be handed in on the due date at the beginning of the lecture. Presentations will be scheduled during lecture hours towards the end of the course.

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# Course Outline:

**1. Introduction to Market Research**

1.1. Overview

**2. Survey Design**

2.1. Sample Design

a) Design Types

b) NZ Sampling Frames

2.2. Weighting

2.3. Data Cleaning/Imputation

2.4. Sampling Errors/Variances

**3. Regression and GLMs**

3.1. Linear and logistic regression

3.2. Principal Components and Factor Analysis

3.3. Principle components regression

3.4 Non-Linear modeling

3.5. Case Study: Advertising Effectiveness

**4. Choice Modeling**

4.1. Experimental Design

4.2. Analysis

4.3. Presentation – decision tool

**5. Multivariate Analysis**

5.1. Segmentation

5.2. Targeting

**6. Probability Models**

6.1. Introduction

6.2. General Approach

6.3. Reach & Frequency Models

**7. Data Mining in Market Research**

7.1. CART/CHAID

7.2. Market Basket Analysis

STATS 747 Draft Schedule - 2010

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Starts | Wed | Fri | Deadlines |
| 1 | 19 July | 1 | 2 |  |
| 2 | 26 July | 2 | 2 |  |
| 3 | 2 August | 3 | 3 | Asst 1 |
| 4 | 9 August | 3 | 3 |  |
| 5 | 16 August | 4 | 4 | Asst 2 |
| 6 | 23 August | 4 | 4 |  |
|  | *30 August*  | *Break* |  |
|  | *6 September* | *Break* |  |
| 7 | 13 September | 4 | 4 | *Project 1 part 1* |
| 8 | 20 September | 5 | 5 | Asst 3 |
| 9 | 27 September | 5 | 6 |  |
| 10 | 4 October | 6 | 6 |  |
| 11 | 11 October | 7 | 7 | Asst 4 |
| 12 | 18 October | *Presentations Project Part 2* |

Final Exam TBA