

Statistics for Managers
MNGT 4630
(Core)

Dr Paul Walsh

Session 3, 2008

Class Dates: 13-16; 18-21 December 2008
Examination: 21 January 2009
Payment Due: 14 November 2008

Course aims / objectives:

At no time in our history have managers had greater access to data about the performance of their firms. Data warehouses, e-commerce solutions, employee and customer surveys, financial reporting, Lean Six Sigma and transaction databases are providing managers with significant opportunities to manage with data. But have the skills of managers kept pace? Do managers know how to analyse data, to report and argue confidently about what the data is suggesting? The answer is probably, in all but the simplest cases, no. Can they navigate a statistical package on their PCs with ease, selecting the tools that analyse performance results and model cause-and-effect? Except for basic spreadsheet functions, the answer is again probably no.

This course prepares students in understanding and applying the concepts and tools of data analysis to areas such as process improvement and Key Performance Indicators. Areas such as marketing, human resource management, operations, information systems and accounting provide rich opportunities for the application of data analysis and statistical modelling. This course acts as a service course for analysing data from all areas of business.

This course will combine theory from the course notes with problem-solving exercises using the statistical package StatTools, an Excel Add-In. Emphasis will be placed on the selection of the appropriate statistical technique to solve business problems and the interpretation of the associated theory.

Assessment:

2 Group assignments with individual weighting: 50%

Final examination (open book, two & one half hours): 50%

Award of a Fail Grade

Any student not submitting both assignments will automatically receive a Fail grade.

Course details / modules:

Day 1: Saturday, 13 December (2.00pm – 8.00pm)

- Overview of Course
- StatTools™ Tour
- Unit 1: Descriptive Statistics

Day 2: Sunday, 14 December (10.00am – 7.00pm)

- Unit 2: Continuous Random Variables (morning session)
- Unit 3: Hypothesis Testing and Confidence Intervals (afternoon session)

Day 3: Monday, 15 December (7:00pm – 10:15pm)

- Unit 4: Simple Linear Regression Models Part I

Day 4: Tuesday, 16 December (7:00pm – 10:15pm)

- Unit 5: Simple Linear Regression Models Part II

Free Day: Wednesday, 17 December No Class

Day 5: Thursday, 18 December**(7:00pm – 10:15pm)**

- Unit 5: Simple Linear Regression Models Part II (continued)

Day 6: Friday, 19 December**(7:00pm – 10:15pm)**

- Unit 6: Multiple Linear Regression Models

Day 7: Saturday, 20 December**(2.00pm – 8.00pm)**

- Unit 6: Multiple Linear Regression Models (continued)
- Unit 7: Time Series Models

Day 8: Sunday, 21 December**(10.00am – 7.00pm)**

- Unit 8: Models with Both Time Series & Regression Variables
- Unit 9: Course Summary
- Exam Review

Academic honesty and plagiarism:

The University regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. For full information regarding policies, penalties and information to help you avoid plagiarism see: <http://www.lc.unsw.edu.au/plagiarism/index.html>

Plagiarism is the presentation of the thoughts or work of another as one's own.* Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty. It can be located at: www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle

† Adapted with kind permission from the University of Melbourne.

Course materials and text/s:

There is no textbook.

A set of Course Readings will be provided.

Please bring your **Course Notes** to the Computer Lab
so you can work through the material and exercises in each unit.

Other references:

Optional:

For students who have had no exposure to statistics:

Rowntree, D. (1991 Reprint)

Statistics Without Tears: A Primer for Non-Mathematicians, Penguin

ISBN 0-14-01.3632-0

For students who want more practice in the concepts in the earlier parts of the course:

Gosling, J. (2004 Reprint)

Introductory Statistics, Pascal Press www.pascalpress.com.au

ISBN 1-86441-015-9

For students wishing a tutorial in StatTools beyond the On-line Manual inside the Help function:

Albright, S.C., 2003, *Learning Statistics with StatTools*, Palisade Corporation. Available at:

<http://www.palisade.com.au>

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