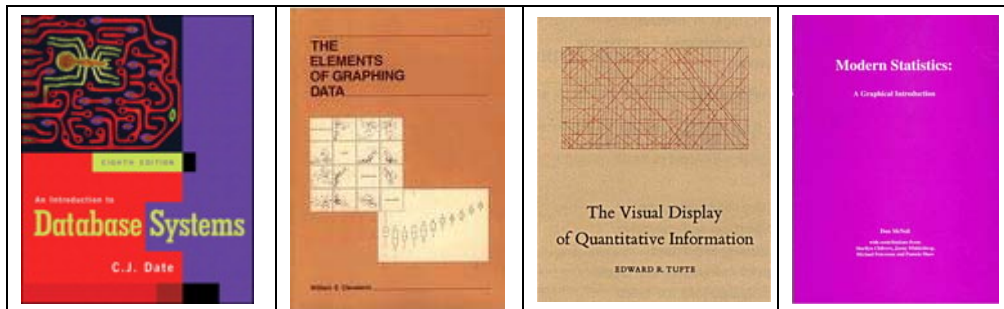# DIVISION OF ECONOMIC AND FINANCIAL STUDIES

MIST811: INFORMATION MANAGEMENT
STAT812: INFORMATION MANAGEMENT

First Semester, 2006

Unit Outline

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult one of the teaching staff in the unit.

ABOUT THIS UNIT

The unit is aimed at graduate students who are interested in developing knowledge and skills in relational database; and students with some computing skills who wish to gain a better understanding of the use of statistical methods in managing and interpreting numerical information.

There are three essential components: (1) relational database, (2) statistical graphics, & (3) statistical methods. Students are expected to gain a reasonable level of expertise in each of these topics, and to make connections between them.

MIST811/STAT812 is a four credit point unit offered by the Statistics Department in the Division of Economic and Financial Studies. It can be taken in the evening in the first semester. This unit expands on topics covered in MIST800 Computer Applications in Business and is available to graduate students both in Business and in Applied Statistics. STAT812 is also available externally in first semester. MIST811 is offered as part of the Master of Commerce/Master of International Business Program. STAT812 is offered as part of the Master of Applied Statistics Program.

Software:
Microsoft Excel & Access, EcStat

Prerequisite:
Basic quantitative knowledge (STAT170 or MIST800 or equivalent).

TEACHING STAFF

Lecturer In Charge	Dr Tania Prvan
Relational Database	Room: E4A510
	Phone: 9850 8561
	e-mail: tprvan@efs.mq.edu.au
	Consultation hours: To be advised
Statistics	Ms Nan Carter
	Room: E4A520
	Phone: 9850 8516
	e-mail: ncarter@efs.mq.edu.au
	Consultation hours: To be advised
Tutor:	TBA

UNIT WEB PAGE

The web page for this unit can be found at: http://www.stat.mq.edu.au/units/stat812/index.htm.

CLASSES

Lectures
Lectures begin in Week 1. Lectures are held on Mondays between 6:00pm and 8:30pm in room E5A 116.

Tutorials
Tutorials also begin in Week 1. Tutorials are held on Monday between 8:30pm and 10:30pm in E4B 308. The aim of tutorials is to practise techniques learnt in lectures. They are designed so that students work through the exercises and ask as many questions as they need to improve their understanding. Tutors are the facilitators in the tutorial groups.

The timetable for classes can be found on the University web site at:
http://www.timetables.mq.edu.au/

REQUIRED AND RECOMMENDED TEXTS

Required Text

1. McNeil, Don (2003) *Modern Statistics: A Graphical Introduction*. North Ryde, N.S.W.: Macquarie University

The introductory text Modern Statistics: A Graphical Introduction (by Don McNeil), will be **provided free for students** enrolled after week 2. However, this book does not really go far enough, and additional notes will be provided to enrolled students.

Recommended Texts

2. Date, C.J. *Introduction to Database Systems (8th edition)*, Addison-Wesley, 2004, ISBN 0-321-19784-4. (Not available in the library)

    Date, C.J. *Introduction to Database Systems (7th edition)*, Addison-Wesley, 2000. (Library call number QA76.9.D3 .D37/2000.)

    While we will cover only a relatively small part of this book, it remains the bible on relational database concepts, and would be a good investment for any student who wishes to gain an understanding of database systems. There aren't big differences between the 7th and 8th editions for the first three chapters.

3. William.S. Cleveland: *The Elements of Graphing Data* (revised edition). Hobart Press, Summit, New Jersey (1994). (Library call number QA90 .C54/1994.)

4. Edward R. Tufte: *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut (1983). (Library call number QA276.3 .T8.)

LEARNING OUTCOMES

By the end of this unit students should be able to:
- assess critically the simple statistical content of articles and other presentations in the media, as well as understand and appreciate the judicious use of statistics in your own field of study.
- choose suitable graphical representations of data
- carry out simple statistical analyses of data
- have an understanding of the principles and the concepts of databases
- set up a database in Microsoft Access efficiently
- interrogate the database to extract information needed for statistical analysis

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. One of the aims of this unit is that students develop their skills in the following:
- problem solving skills;
- written communication skills, particularly report writing;
- critical analysis skills.

TEACHING AND LEARNING STRATEGY

The unit is taught in traditional mode; that is, on campus in standard semesters with weekly lectures and tutorials.

Students are expected to
- attend all the lectures and the tutorials;
- prepare their own solutions to selected weekly practical exercises for individual assessment of lab tasks
- hand in assignments and homework to ERIC (Economic Resource & Information Centre) E4B106;
- Collect their marked assessment from ERIC (Economic Resource & Information Centre) E4B106.
- if for any reason, students cannot hand in their assessment tasks on time, they have to contact one of the teaching staff in advance

Refer to the end of handout for week-by-week list of topics to be covered.

WEB ACCESS

There is a web site for this subject. All students (MIST or STAT) should log on to STAT812 web site http://www.stat.mq.edu.au/units/stat812/index.htm.

Weekly lecture notes excluding readings, lab exercises, data files will be put into web site after the lecture.

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

While attendance at classes is important it is only a small proportion of the total workload for the unit: reading, completing assignments and other assessments, using the computer and private study are all part of the work involved. At Macquarie it is expected that the average student should spend four hours per week per credit point including attending lectures and tutorials.

The assessment is based on the performance in the tutorials (including homework), class test (MIST811 students only), assignments, and the final examination.

Assessment	Weighting	Due
Assignment 1	5%	6pm 13 March
Assignment 2	5%	6pm 3 April
Assignment 3	10%	6pm 29 May
Mid Semester Test (MIST811 only)	20%	6pm 10 April
Assignment 4 (STAT812 only)	10%	6pm 1 May
Homework and Tutorial Participation	10%	Each weeks tutorial
Final Examination (STAT812)	60%	As timetabled
Final Examination (MIST811)	50%	As timetabled

Marked assignments and homeworks will be available for collection from ERIC (Economic Resource & Information Centre) E4B106 approximately two weeks after the due date.

Late assessments will only be accepted with the agreement of the lecturer and may be subject to the deduction of some marks. Students who are unable to submit any assignment on time, because of illness or other valid cause, will need to report the circumstances in writing to the unit convenor, and documentation must also be provided to the Registrar.

Mid Semester Test (MIST811 students only)
This will be held in the first 50 minutes of the week 7 lecture. This covers the first six weeks of lecture material and readings. Students may bring one A4 sized sheet of **hand written** notes, formulae, etc., which may be written on both sides and is easily readable. This summary must be submitted with your test paper and is marked. The rest of the lecture will cover new work.

Examination
Date and venue to be advised in lectures. The examination will examine any material covered throughout the course. Students may bring two A4 sized sheets of **hand written** notes, formulae, etc., which may be written on both sides and is easily readable. This summary must be submitted with your exam paper and is marked. No other materials such as lecture notes and textbooks are permitted. Calculators will be needed but must not be of the text/programmable type.

MIST811 final examination is two and an half hours long plus 10 minutes reading time. STAT812 final examination is three hours long plus 10 minutes reading time.

NOTE: To obtain a passing grade, both coursework and exam performance must be satisfactory.

The University Examination period in First Half Year 2006 is from 14th June to 30th June.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations.
http://www.timetables.mq.edu.au/exam

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at http://www.reg.mq.edu.au/Forms/APSCon.pdf

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester that is the final day of the official examination period.

PLAGIARISM

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at: http://www.student.mq.edu.au/plagiarism/

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

STUDENT SUPPORT SERVICES

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at http://www.student.mq.edu.au.

UNIVERSITY POLICY ON GRADING

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG).

On occasion your raw mark for a unit (i.e., the total of your marks for each assessment item) may not be the same as the SNG which you receive. Under the Senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

It is important that you realise that the policy does not require that a minimum number of students are to be failed in any unit. In fact it does something like the opposite, in requiring examiners to explain their actions if more than 20% of students fail in a unit.

The process of scaling does not change the order of marks among students. A student who receives a higher raw mark than another will also receive a higher final scaled mark.

For an explanation of the policy see
http://www.mq.edu.au/senate/MQUonly/Issues/Guidelines2003.doc or
http://www.mq.edu.au/senate/MQUonly/Issues/detailedguidelines.doc.

COMPUTER LABS AND THEIR CONDITIONS OF USE

PROBLEMS WITH LAB COMPUTERS?

Problems with lab computers should be reported as follows:
1. if the problem occurs during a class report problem to your tutor
2. if problem occurs outside class time, then report problem by phone or e-mail to the lab administrator
       Mr Alfred Wong awong@efs.mq.edu.au (ext 6138)
   using your *Macquarie University E-MAIL BROWSER ACCOUNT* and no other (staff are instructed to ignore e-mails from Hotmail accounts, etc). **BE SURE TO INCLUDE YOUR NAME, CLASS, LAB ROOM, PC NUMBER AND A BRIEF DESCRIPTION OF THE PROBLEM.**

Unit Schedule

Week	Topic	Software	Assignment	
			Out	**Due**
1 (27 Feb)	Getting Information from Numerical Data: Preliminary Analyses	Excel	**Ass 1**	
2 (6 Mar)	Statistics I: Finding reasons for the Variability in the Data	Excel		
3 (13 Mar)	Statistics II: Reporting and Presenting the Results	Excel	**Ass 2**	**Ass 1**
4 (20 Mar)	Relational Database I: Tables, relationships, forms	Access		
5 (27 Mar)	Relational Database II: Further Queries & Normalisation of the tables	Access		
6 (3 April)	Statistics III: Relationships Amongst the Variables	Excel	**Ass 4***	**Ass 2**
7 (10 April)	Relational Database III: Reports **MIST811 Mid Semester TEST**	Access		
	TWO WEEK BREAK			
8 (1 May)	Statistics IV: Associations Amongst the Variables	Excel	**Ass 3**	**Ass 4***
9 (8 May)	Statistics V: Meta analysis	Excel		
10 (15 May)	Statistics VI: Sample size & Statistical Power	Excel		
11 (22 May)	Relational Database IV: SQL	Access		
12 (29 May)	REVISION I			**Ass 3**
13 (5 June)	REVISION II			

****STAT812 students have an additional assignment denoted by Ass 4.**

Lecture Overheads
PowerPoint slides covering each week's material will be available on the web site associated with MIST811/STAT812 (http://www.stat.mq.edu.au/units/stat812/index.htm), and hard copy will also be provided to internal, enrolled students at the lecture, together with tutorial exercises. The datasets required for the lab exercises and the assignments can be downloaded from the web site.