



**DIVISION OF ECONOMIC AND FINANCIAL STUDIES**

**MIST811: INFORMATION MANAGEMENT**

**STAT812: INFORMATION MANAGEMENT**

**First Semester, 2005 – E1**

**UNIT OUTLINE**

**Unit convenor:** Dr Tania Prvan

**Prerequisites:** Basic quantitative knowledge (STAT170 or MIST800 or equivalent).

Information Resource Centre  
Division of Economic & Financial Studies  
MACQUARIE UNIVERSITY

*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 targets two groups of graduate students, including (a) specialists in Statistics who are interested in developing knowledge and skills in relevant computing methods, and (b) non-specialists in Statistics with computing skills who wish to gain a better understanding of statistical methods, as well as enhancing their computing skills. These two groups are accommodated by focusing on the development of an expert statistical system using standard data management software.

There are three essential components: (1) relational database, (2) statistical graphics, & (3) statistical methods for data analysis. 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 either evening in the first semester or day in the second 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 second 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

**TEACHING STAFF****Lecturer In Charge:**

Dr Tania Prvan  
Room: C5C454  
Phone: 9850 8561  
e-mail: tprvan@efs.mq.edu.au  
Consultation hours: To be advised

**Statistics:**

Ms Nan Carter  
Room: C5C 458  
Phone: 9850 8509  
e-mail: ncarter@efs.mq.edu.au  
Consultation hours: To be advised

**Tutors:**

Dr Frederick Wong

Ms Nan Carter will be teaching weeks 2, 4, 6, 9, 10 and 11 and Dr Tania Prvan will be teaching the rest of the weeks.

**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. 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 AND/OR MATERIALS****Prescribed texts**

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**

1. Date, C.J. *Introduction to Database Systems (7th edition)*, C.J., Reading, MA: Addison-Wesley, 2000. published by Addison-Wesley. (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.*
2. William.S. Cleveland: *The Elements of Graphing Data* (revised edition). Hobart Press, Summit, New Jersey (1994). (Library call number QA90 .C54/1994.)
3. Edward R. Tufte: *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Connecticut (1983). (Library call number QA276.3 .T8.)

**UNIT WEB PAGE**

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

**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 data base to extract information needed for a 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 (some of which are in the computer laboratory).

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 laboratory exercises at the conclusion of the tutorial in weeks 8 to 13;
- if for any reason, students cannot hand in their assessment tasks on time, they have to contact one of the teaching staff in advance
- hand in assignments and homework to ERIC (Economic Resource & Information Centre) C5C244;
- Collect their marked assessment from ERIC (Economic Resource & Information Centre) C5C244.

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

### 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 projects, performance in the tutorials (including homework), class test (MIST811 students only), assignments, and the final examination.

Assessment	Weighting	Due
Assignment 1	5%	6pm 14 March
Assignment 2	5%	6pm 11 April
Assignment 3	10%	6pm 30 May
Test (MIST811 only)	20%	6pm 2 May
Assignment 4 (STAT812 only)	10%	6pm 9 May
Homework and Tutorial Participation	10%	Each weeks tutorial
Final Examination (STAT812)	60%	As timetabled
Final Examination (MIST811)	50%	As timetabled

Marked assignment and homeworks will be available for collection from ERIC (Economic Resource & Information Centre) C5C244 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 8 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. Any other materials such as lecture notes and textbooks are not 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 2005 is from 5<sup>th</sup> June to 29<sup>th</sup> 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.

### 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>.

### 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>.

### ADVANCED STATISTICS COMPUTER LABS AND THEIR CONDITIONS OF USE

We have two labs that students can use during the term: W6B301 and Statistical Information Systems Lab (SIS Lab). Both of these labs are fitted with surveillance cameras and the activities in the room are recorded for security purposes. The first lab is located in building W6B and the SIS Lab is located in the Becton-Dickinson (BD) Building.

#### W6B301 OPENING HOURS

The lab is open 24 hours per day 7 days per week.

**WARNING: students are strongly advised not to remain alone in the room after normal office hours.**

**You are encouraged to phone University Security**

**phone x7112 from inside the lab,  
see <http://www.bgo.mq.edu.au/security2.htm>)**

**at any time after hours, during term time, if you require an escort to your vehicle or public transport.**

**WHILE USING W6B301 YOU MUST COMPLY WITH ANY REQUEST BY MACQUARIE UNIVERSITY SECURITY STAFF.**

**To gain access to W6B301 after hours**

Each student must obtain a swipe-card which is to be used at entry points to the building W6B and (as of mid-year) for entry into the lab in room W6B301. But until mid-year there will be a press button door lock on Room 301 the code for which will be disclosed in lectures.

For the swipe-card, there is a form available from the Dept. Administrator Ms Sue Pe (Room C5C474) or it may be issued in lectures. This has to be completed and returned to your lecturer or to Ms Sue Pe. The forms are entered on a security database and then cards will be programmed for each student. Students are to collect their cards from the front desk of the Division of Economic & Financial Studies. Ask for Ms Hiranya Loader or Ms Sue Coleman who will be able to issue the cards.

**IF YOU LOSE YOUR CARD YOU WILL BE CHARGED \$50 FOR A REPLACEMENT.**

NOTE:

- you must NOT lend your card to anyone
- you must carry your student ID with you when you use the card
- the campus security officers know the ID's of those students who are currently in the lab. They will periodically check the ID's of students in the lab. *Anyone without their student ID or who does not have his or her own swipe-card will be told to leave the building immediately*
- *swipe-cards that have been borrowed from another student will be immediately confiscated and no replacement card will be issued*

**To gain access to the SIS Lab**

The SIS Lab is in the BD building near the junction of Research Park Road and the road/path running down the centre of the University (past the Library, C5C, the Council Building, E7A, etc.). It is a 5 minute walk from C5C.

Check the map on the website:

[http://www.bgo.mq.edu.au/images/S\\_E.gif](http://www.bgo.mq.edu.au/images/S_E.gif)

The SIS Lab is on the second floor. As you get out of the lift, turn right then right again and it is the door on the left. If it is locked during weekdays from 9 – 5, contact the dept. (9850 8555) or Julian Leslie (9850 8593). This lab has about 14 computers running Windows and 4 running both Unix and Windows.

NOTE: The lab is to be used for doing lab exercises, assignments and projects arising *only from units that use W6B301 for lectures/tutorials or prac classes.*



**SIS LAB OPENING HOURS**

The SIS Lab is open only during the hours of 9 am – 6 pm on weekdays. IT IS NOT AVAILABLE OUTSIDE THESE HOURS. STUDENTS MUST LEAVE THE LAB BY 6pm. UNDER NO CIRCUMSTANCES IS A COURSEWORK MASTERS STUDENT TO REMAIN IN THIS LAB AFTER HOURS.

**Obtaining User Account in these labs**

Each student will be given a user name and password for these labs once they are listed as enrolled in a MIST unit. After the first time logging into the server, the students need to change their password. The new (changed) password will expire in 30 days and needs to be changed again. If you do not change your password, you will not be able to login to the server again. If this happens, please talk to your tutor or the computer lab administrator:

Mr. Alfred Wong, [awong@efs.mq.edu.au](mailto:awong@efs.mq.edu.au)

A time-table for the classes scheduled for each week will be displayed on the door of W6B301. If there is a class in progress, students who are not enrolled in that class are not allowed to use the computers in the lab without permission from the tutor.

**PROBLEMS WITH LAB COMPUTERS?**

Problems with lab computers (W6B or SISL) 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

Ms Susan Pe (ext 8550 [sdjunaid@efs.mq.edu.au](mailto:sdjunaid@efs.mq.edu.au) )

or by e-mail to the lab administrator

Mr Alfred Wong [awong@efs.mq.edu.au](mailto:awong@efs.mq.edu.au)

(USING YOUR MU E-MAIL BROWSER ACCOUNT and no other – staff are instructed to ignore e-mails from Hotmail accounts, etc). BE SURE TO INCLUDE YOUR NAME AND CLASS, THE LAB AND PC NUMBER AND A BRIEF DESCRIPTION OF THE PROBLEM.

**Unit Schedule**

Week	Topic	Software	Assignment	
			Out	Due
1 (28 Feb)	Research Design	Excel	Ass 1	
2 (7 Mar)	Statistical Methods I: analysis paradigm	Excel		
3 (14 Mar)	Relational Database I: tables & forms	Access	Ass 2	Ass 1
4 (21 Mar)	Statistical Graphics I: confidence intervals	Excel		
5 (28 Mar)	PUBLIC HOLIDAY – NO LECTURE			
6 (4 April)	Statistical Methods II: hypothesis tests	Excel		
7 (11 April)	Database II: queries	Excel & Access	Ass 4*	Ass 2
<b>TWO WEEK BREAK</b>				
8 (2 May)	Database III: reports & <b>MIST811 Mid Semester TEST</b>	Access		
9 (9 May)	Statistical Graphics II: associations	Excel		
10 (16 May)	Statistical Methods III: meta analysis	Excel	Ass 3	Ass 4*
11 (23 May)	Statistical Methods IV: sample size	Excel		
12 (30 May)	Database IV: Visual Basic	Excel & Access	Ass 3	
13 (6 June)	Synthesis: thesis-writing REVISION	Word & Excel		

*\*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, and hard copy will also be provided to internal, enrolled students at the lecture, together with tutorial exercises and comprehensive relevant handouts.

**Note:** This unit outline is available from the MIST811/STAT812 web page by clicking on **Unit Outline**.