MACQUARIE UNIVERSITY

FACULTY OF BUSINESS AND ECONOMICS

ACCG 860
Quantitative Methods

Semester One, 2011

Department of Accounting and Finance

MACQUARIE UNIVERSITY
FACULTY OF BUSINESS AND ECONOMICS
UNIT GUIDE

Year and Semester: Semester 1 2011

Unit convenors: Anne Karpin and Jenny Middledorp

Credit points: 3 credit points

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

ABOUT THIS UNIT

This unit aims to convey an understanding of the quantitative and statistical techniques that are frequently used in accounting and financial studies. The techniques require logical reasoning, objective analysis and inference based on empirical evidence. Essential statistical techniques such as probability, sampling, measurement, correlation, regression, analysis of variance, non parametric methods and hypothesis testing are covered. A statistical package is used to analyse data and produce statistical reports. The unit provides 3 credit points.

TEACHING STAFF

Name	Role in unit	Phone	Email
Anne Karpin	Unit Convenor	9850 9617	anne.karpin@mq.edu.au
Jenny Middledorp	Unit Convenor	9850 8560	jenny.middledorp@mq.edu.au
Bala Pasupathy	Lecturer		balamehala.pasupathy@mq.edu.au

CONSULTATION TIMES

You are encouraged to seek help from a staff member teaching on this unit at a time that is convenient to you and the staff member. Where possible, staff will answer questions by email. Otherwise, please make an appointment with your lecturer.

Students experiencing significant difficulties with any topic in the unit should seek assistance immediately.

CLASSES

There are three hours face-to-face teaching per week consisting of a mixture of lecture and practical classes. 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

There are no set texts. Lecture and practical notes will be provided on each topic and will be posted on Blackboard. Students should make sure they download the lecture and practical material each week and bring them to class. Reference books available in the library are:

- *Australasian Business Statistics* by Black et al
- *Introduction to Business Statistics* by Weiers, Ronald M.
- *Australian Business Statistics* by Selvanathan, Selvanathan, Keller and Warrack
- *Essentials of Business Statistics* by Bowerman, O'Connell and Orris
- *Statistics for Business and Economics* by McClave, Benson and Sincich
- *Business Statistics: A Decision Making Approach* by Grobner, Shannon, Fry and Smith

TECHNOLOGY USED AND REQUIRED

- The statistical package MINITAB will be used and students will learn to analyse data using MINITAB. The package can be downloaded onto students' home computers.

UNIT WEBPAGE

The web page for this unit can be found at:

http://www.accg.mq.edu.au/postgraduate/course_units/accg860

Unit materials, assignments, solutions, announcements and other relevant information can be found on Blackboard and students should visit this site regularly at:

http://learn.mq.edu.au

LEARNING OUTCOMES

On completion of this unit students should be able to:

1. Understand the general principles of sampling and study design.
2. Summarise data graphically and numerically using appropriate techniques.
3. Interpret questions which require statistical analysis and recognise the appropriate statistical procedure to apply in each case.
4. Use a statistical package to analyse data and answer research questions.
5. Interpret statistical output and write up reports based on the output.
6. Apply generic skills, in particular analytical, critical, problem-solving, creative thinking and interpersonal skills.
7. Work cooperatively as a team member to develop communication and problem solving skills.

GRADUATE CAPABILITIES

In addition to the discipline-based learning objectives, all academic programs delivered at Macquarie University North Ryde and City campuses seek to develop the capabilities the University's graduates will need to develop to address the challenges and to be effective, engaged participants in their world. This unit contributes to this by developing the following graduate capabilities:

1. Discipline Specific Knowledge and Skills
2. Critical, Analytical and Integrative Thinking
3. Problem Solving and Research Capability
4. Creative and Innovative
5. Effective Communication
6. Engaged and Ethical Local and Global citizens
7. Socially and Environmentally Active and Responsible
8. Capable of Professional and Personal Judgement and Initiative
9. Commitment to Continuous Learning

TEACHING AND LEARNING STRATEGY

New material will be introduced in each lecture. During practical classes students will work on problems based on the material presented in lectures and write up relevant summaries of results. Students are expected to have read through the material to be covered in class each week. Course material will be made available online using Blackboard which can be accessed at:

http://learn.mq.edu.au.

A week-by-week list of the topics to be covered is available at the end of this document.

RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

	Diagnostic Test	Assignments	Mid-Semester Test	Practical Test	Final Examination
Description	Online short answer quiz: 50 minutes.	Two assignments to be completed in groups of 3 students.	Written test: 75 minutes plus 5 minutes reading time.	Online quiz using the statistical package MINITAB: 50 minutes.	Written exam plus multiple choice: 3 hours plus 10 minutes reading time.
Due date	During your class in Week 5.	Assignment 1: Week 6 Assignment 2: Week 10.	Mid-semester break.	During your class in Week 13.	During final examination period.
% Weighting	5%	5% each	15%	10%	60%
Grading method	Mark out of 100. This is an early assessment designed to give feedback to students on their performance thus far.	A mark of at least 70% will be awarded the full 5%. If the mark is below 70% then the mark itself as a percentage will be awarded. Some marks will be awarded for presentation.	Assessed and graded on lecture topics 1-7.	Assessed and graded on lecture topics 1-13.	Assessed and graded on lecture topics 1-13.
Submission method	Online submission during relevant class in week 5.	To be submitted via the relevant assignment box in BESS.	Hand in examination script.	Online submission during relevant class in week 13.	Hand in examination script.
Feedback	Feedback will be provided on Blackboard.	Model solutions will be provided on Blackboard.	Model solutions will be provided on Blackboard.	Marks will be provided on Blackboard.	
Estimated student workload (hours)	Approximately 8 hours although this will vary between students depending on your own time-management for revision.	Approximately 10 hours each assignment.	Approximately 15 hours although this will vary between students depending on your own time-management for revision.	Approximately 15 hours although this will vary between students depending on your own time-management for revision.	This will vary between students depending on your own time-management for revision.
Learning outcomes assessed	1, 2 and 6	1 – 7	1 – 6	1 – 6	1 – 7
Graduate capabilities assessed	1 – 3	1 – 9	1 – 5	1, 2 3 & 8	1 – 9

Extensions will only be granted if a medical certificate is presented or there are other extenuating circumstances.

Late submissions will not be accepted.

WEIGHTINGS OF ASSESSMENT TASKS

The following weightings apply for unit assessment:

	%
Diagnostic Test	5
Assignments	10
Mid Semester Test	15
Practical Test	10
Final Examination	60
	100

Diagnostic Test
The diagnostic test, which students will complete in Week 5, is designed to give feedback to students regarding their progress. It will cover materials presented in the first 4 weeks of the unit.

Assignments
Each assignment requires students to assimilate the procedures, content and methodology covered in the preceding weeks and to apply these to solving the problems presented. If students have satisfied all the objectives for particular topics they will be able to successfully complete the assignment work based on these topics. Model solutions will be provided.

There will be two assignments. They will be posted on Blackboard two weeks before their due dates. Each assignment is worth 5% and must be completed in groups of three students. Allocation of marks for each assignment is on a pass/fail basis. A mark of at least 70% on an assignment is required for a passing grade, in which case the full percentage will be allocated to each student. If the assignment is given a mark below 70% then the mark itself as a percentage will be awarded. Each student should work on the entire assignment independently in the first instance and discuss their solutions with their group members before writing up a joint assignment for submission. Assignments must be presented as word-processed documents. Assignments are due at the beginning of your lectures in weeks 6 and 10 and should be submitted to your lecturer. Late assignments will not be accepted without written evidence of illness or misadventure. Assignments will be returned to students within two weeks of submission.

Each assignment that is submitted should be the work of one group of students only. If there is evidence of collusion between assignment groups, this will be considered as plagiarism. Under these circumstances, all students involved will receive a mark of zero for the assignment.

Mid Semester Test
Students will be required to sit a mid semester test which will be held during the mid semester break and will cover all material up to and including Week 7. The mid semester test is designed to reinforce concepts introduced in the first seven weeks of the unit.

Practical Test
The practical test will be held during class in Week 13. It will examine students on the use of the statistical package MINITAB used in this unit and will cover all material in the unit.

Examination
A 3 hour final examination for this unit will be held during the University Examination period. Students may bring into the exam two (2) A4 pages of notes hand written on both sides. Note that dictionaries are not allowed in the exam. It should be noted that students must pass the final examination in order to pass the unit, regardless of their performance on other assessment tasks.

The University Examination period in First Half Year 2011 is from 6 June to 24 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. The University's policy on special consideration process is available at:

http://www.mq.edu.au/policy/docs/special_consideration/policy.html

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. (Individual Faculties may wish to signal when the Faculty's Supplementary exams are normally scheduled.)

The Macquarie university examination policy details the principles and conduct of examinations at the University. The policy is available at:

http://www.mq.edu.au/policy/docs/examination/policy.htm

ACADEMIC HONESTY

The nature of scholarly endeavor, dependent as it is on the work of others, binds all members of the University community to abide by the principles of academic honesty. Its fundamental principle is that all staff and students act with integrity in the creation, development, application and use of ideas and information. This means that:

- all academic work claimed as original is the work of the author making the claim
- all academic collaborations are acknowledged
- academic work is not falsified in any way
- when the ideas of others are used, these ideas are acknowledged appropriately

Further information on the academic honesty can be found in the Macquarie University Academic Honesty Policy at:

http://www.mq.edu.au/policy/docs/academic_honesty/policy.html

GRADES

Macquarie University uses the following grades in coursework units of study:

HD - High Distinction
D - Distinction
CR - Credit
P - Pass
F - Fail

Grade descriptors and other information concerning grading are contained in the Macquarie University Grading Policy which is available at:

http://www.mq.edu.au/policy/docs/grading/policy.html

It is important to note that the student numerical grade (SNG) is not a summation of the assessment components. To be awarded a specific grade, students are required to perform at an equivalent standard in the final examination, as well as other assessments within the unit.

GRADING APPEALS AND FINAL EXAMINATION SCRIPT VIEWING

If, at the conclusion of the unit, you have performed below expectations, and are considering lodging an appeal of grade and/or viewing your final exam script please refer to the following website which provides information about these processes and the cut off dates in the first instance. Please read the instructions provided concerning what constitutes valid grounds for appeal before appealing your grade.

http://www.businessandeconomics.mq.edu.au/for/new_and_current_students/undergraduate/admin_central/grade_appeals.

SPECIAL CONSIDERATION

The University is committed to equity and fairness in all aspects of its learning and teaching. In stating this commitment, the University recognises that there may be circumstances where a student is prevented by unavoidable disruption from performing in accordance with their ability. A special consideration policy exists to support students who experience serious and unavoidable disruption such that they do not reach their usual demonstrated performance level. The policy is available at:

http://www.mq.edu.au/policy/docs/special_consideration/procedure.html

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.

IT CONDITIONS OF USE

Access to all student computing facilities within the Faculty of Business and Economics is restricted to authorised coursework for approved units. Student ID cards must be displayed in the locations provided at all times.

Students are expected to act responsibly when utilising University IT facilities. The following regulations apply to the use of computer labs and online services:

- Accessing inappropriate web sites, or downloading inappropriate material, is not permitted. Material that is not related to coursework in units authorised to use these facilities is deemed inappropriate.
- Downloading copyright material without permission from the copyright owner is illegal and strictly prohibited. Students detected undertaking such activities will face disciplinary action, which may possibly result in criminal proceedings.

Non-compliance with these conditions may result in disciplinary action without further notice.

Students must use their Macquarie University email addresses to communicate with staff as it is University policy that the University issued email account is used for official University communication.

Semester 1 2011

UNIT SCHEDULE

Week commencing	Week	Topics Covered	Assessment Due
21 February	1	Introduction to Statistics and Data Display	
28 February	2	Numerical Summaries	
7 March	3	Probability and Distributions	
14 March	4	Sampling Distributions	
21 March	5	Estimation & Confidence Intervals	**Diagnostic Test**
28 March	6	Testing Hypotheses - Single Samples	Assignment 1
4 April	7	Testing Hypotheses - Two Samples	
SEMESTER BREAK: 9 April – 26 April (Monday 25th April and Tuesday 26th April are Public Holidays) **Mid Semester Test**			
27 April	8	Analysis of Variance	
2 May	9	Regression I	
9 May	10	Regression II	Assignment 2
16 May	11	Categorical Data Analysis	
23 May	12	Non-parametric Methods	
30 May	13	Revision	**Practical Test**