



Victoria Management School

MGMT 316 DECISION MODELLING FOR MANAGERS

Trimester Two, 2007

COURSE OUTLINE

CONTACT DETAILS

COURSE COORDINATOR

A/Prof Bob Cavana

Room: RH 904, Rutherford House

Phone: 463 5137

Email: <u>bob.cavana@vuw.ac.nz</u>
Website: <u>www.vuw.ac.nz/vms</u>

LECTURER

A/Prof John Davies

Room: RH 1018, Rutherford House

Phone: 463 5382

Email: john.davies@vuw.ac.nz

ADMINISTRATION ASSISTANT

Patricia Lapham

Room: RH 919, Rutherford House Room: RH 120, Rutherford House

Phone: 463 5381 Phone: 463 6968

Email: <u>patricia.lapham@vuw.ac.nz</u> Email: <u>garry.tansley@vuw.ac.nz</u>

CLASS TIMES AND ROOM NUMBERS

Lectures: Friday: 08:30 – 10:20 (Old Government Building, GB LT 4)

They will comprise formal lectures supplemented by case discussion, student presentations and practical exercises. See schedule in Annex A for a week-by-week plan of sessions.

TUTORIAL COORDINATOR

Garry Tansley

This course has a *3-hour final examination* to be held in the examination period from 19th October to 10th November 2007.

Tutorial & Workshops:

Combined Tutorial and Workshop sessions will be held on a Wednesday or Thursday on the Pipitea campus in the Railway Station tutorial rooms (RWW) and computer labs (RW) from Week 3 to 6, and Wee 8 to 11 [8 combined sessions in total]. Students are expected to attend one Tutorial and the Workshop immediately following, ie either T1 AND W1, or T2 AND W2, etc:

T1 [tutorial] W1 [computer workshop]	on on	Wednesday Wednesday	between between	11:30-12:20 12:30-13:20	RWW 313 RW 302
T2 [tutorial]	on	Wednesday	between	15:40-16:30	RWW 314
W2 [computer workshop]	on	Wednesday		16:40-17:30	RW 302
T3 [tutorial]	on	Thursday	between	09:30-10:20	RWW 128
W3 [computer workshop]	on	Thursday		10:30-11:20	RW 202
T4 [tutorial]	on	Thursday	between	14:40-15:30	RWW 128
W4 [computer workshop]	on	Thursday		15:40-16:30	RW 202

Please see TUTORIAL SIGNUP INSTRUCTIONS below for guidelines re signing up for tutorial/workshop combinations.

INTRODUCTION

Welcome to this offering of Decision Modelling for Managers. Decision-making is one of the main activities in which managers engage. This course studies some important types of problems for which managers need to make decisions, and presents some ways of structuring these decisions in order to provide a systematic, reasoned analysis of the situation, leading to better decisions. Such decision models will be used as decision aids, rather than as answers in themselves, to enable managers to make better decisions.

The course continues the study of formalised methods used in previous courses on managerial decision-making and problem solving. The focus is on the development, use and integration of decision models to aid managerial decision-making. Throughout the decision making process, and throughout the course, the emphasis is on taking a managerial view of the situation, and considering all important aspects, exercising both good judgement and sound analysis.

As such, the course will, like earlier courses MGMT 101 and 206, adopt a multiple perspective approach to the framing and solution of managerial problems, and will provide students with an introduction to a range of relevant concepts and frameworks that will allow for the development of a better understanding of problem solving and decision-making processes. Consequently, the course will offer insights about typical decision making behaviour and how that behaviour can be improved through an empathy with the importance of modelling. In particular, the course will challenge students to think systemically and systematically about issues that confront managers when engaged in a variety of planning activities – for example, forecasting and managing resources in a multiplicity of situations.

COURSE OBJECTIVES

Programme and Course-related Learning Objectives

This course will provide students opportunity:

- > to develop oral, written and IT-related communication skills
 - # through active participation in tutorial and class discussion
 - through the development and presentation of oral and written reports, using narrative, rhetoric and diagrammatic and other schema as forms of presentation

- # through formal and informal classroom debate
- > to develop critical and creative thinking skills
 - through exercises and assignments requiring analysis, evaluation, interpretation and synthesis
 - # through debate and classroom discussion
- > to develop leadership skills
 - through structuring independent study
 - through leading a tutorial, project or group exercise
 - through fulfilling spokesperson duties, reporting on a group's activities or ideas to a class
- > to develop computer based analytical skills
 - # through exercises and assignments requiring the use of Excel spreadsheet modelling
 - through participating in computer workshop activities
 - through developing data analysis and management skills in take home assignment projects, and preparation for tutorials and workshops.

Overall Course Objectives

The course has several objectives, which include:

- exploring different means of structuring problems and decision situations using established formal methods and 'softer' informal approaches
- > understanding the variety of ways in which decisions are and can be made
- > improving competence in structuring problems
- > exploring ways of approaching a range of typical managerial problems and tasks in different functional areas of management, at strategic and operational levels
- > developing an ability to devise robust strategies and make balanced decisions
- > comprehending the complex interaction of systemic forces acting on organisations
- developing familiarity with typical decision trade-offs and evaluation techniques for problem situations
- Further developing students' skills in the use of computers in decision making
- Further developing analytical skills in data handling and interpretation

In particular, MGMT 316 will adopt a spreadsheet modelling approach to examining these areas.

Course-related Student Learning Objectives

On successful completion of the course, students should be able:

- ➤ to demonstrate an understanding of some major theoretical frameworks and concepts relevant to decision modelling for managers.
- **>** be able to use such frameworks to enhance your decision making capabilities.
- develop an ability to communicate reason / argument / recommendations etc related to critical analysis of a specified managerial situation using a specific theoretical framework and decision modelling approaches.
- recognise the importance of critical analysis, leadership and communication in the decision sciences.

EXPECTED WORKLOAD

Students can expect the workload to be approximately 10-15 hours per week of student work, including both scheduled contact time (lectures, tutorials, workshops) and outside class.

GROUP WORK

While the course has a tradition of study group collaboration, there are important elements in the assessment process that are strictly individual. Collaboration on individual assignments is <u>not</u> allowed beyond general discussion as to how one might interpret the nature of the assignment question. Please do not work together to formulate a response and do not loan out your completed assignments. You will be expected and encouraged to work in groups on in-term cases and assignments; however reports must be individual submissions.

TUTORIAL SIGNUP INSTRUCTIONS

Requirements to use this S-Cube programme to sign up for tutorials::

- · You will need your SCS username and password; and
- Your course registration status for the tutorial you want to sign up for must be either RE (you registered in person and have paid your fees), RW (you registered via the web and have paid your fees) or AC (you have been accepted into the course but your fees have not yet been paid).

Please note that if your registration status is not RE, RW or AC then S-Cube <u>WILL NOT</u> let you log in. If you cannot log in then please contact the tutorial coordinator in the week beginning 9th of July 2007.

You will only be allowed to enrol in ONE tutorial session. You must always attend the tutorial sessions that you have signed up for. If you attend a different session, your attendance will not be recorded.

Instructions:

Go to the signup website at: https://signups.vuw.ac.nz and enter your SCS username and password to log into the system.

The "Signup Home" page opens. It displays all courses you are enrolled for and that use the new signup system. Click on MGMT316.

MGMT316 course page opens. It will show the course contact, brief detail of the signup requirements including last date to enrol, and the schedule of tutorials. A "key" is provided at the bottom of the page that explains all buttons and what they do.

The schedule of tutorials includes the day/time, location, maximum group size, and spaces left in the tutorial session.

If there are spaces left in a particular session, you will see the "ENROL" button next to it. You can click this button to enrol yourself into that tutorial session.

If there are NO more spaces left in a particular session, find another. You can waitlist in your desired tut if the waitlist spaces have not been filled. If this is the case you will see the "JOIN WAITLIST" button. You can click this button to join the waitlist for your desired tutorial session. You will be removed from any other waitlist you may have joined earlier. If somebody withdraws from this session, you will automatically be moved up the waitlist or enrolled into the session. An email will be sent to you if you're enrolled into the session from a waitlist.

You can only "JOIN WAITLIST" if you have already enrolled in one of the other available sessions. In other words, "ENROL" in one session and then you can choose to join the waitlist for one (1) other preferred session. The WAITLIST is only active while the tutorial sign up process for your course is active. In other words, once the signup process has been closed for your course the WAITLIST is AUTOMATICALLY CANCELLED. It does not roll over into the start of the tutorials.

You can choose to "WITHDRAW" from a session you are already enrolled in as long as you are NOT ON a waitlist. You can also choose to "CANCEL WAITLIST" to remove yourself from a particular waitlist.

A "FULL" button indicates all seats and waitlists are full for that tutorial session. You must choose another.

More details on the various buttons in available in the "Key" section at the bottom of the signup page.

You can only "ENROL" in ONE tutorial session and "JOIN ONE (1) WAITLIST" for another tutorial session.

You will be able to login and signup (or change your signup) anytime between 12 midnight 5th July 2007 and the last date: 23.59hrs on Monday 16th July 2007. You will NOT be able to signup or change your choice after the last date - midnight 16th July 2007. Any changes will be made by the tutorial coordinator on a case by case review of your 'exceptional circumstance'. Please note that work commitments are not a justifiable reason to change your tutorial time.

You can view/confirm details of the sessions that you are enrolled and waitlisted for by clicking on "My Signups" on the left hand menu.

Click on "Support" on the left hand menu if you are having problems.

This online signup system is available round the clock over the internet. Please make use of it to sign up for a MGMT316 tutorial before 23.59hrs on Monday 16th July 2007. Any requests after this date any will need to be manually handled by the Tutorial Coordinator and you will need to submit a written application stating the reason why you were not able to sign up on time using the online system, along with other relevant documentation such as a medical certificate etc. Please note that the tutorial coordinator will only put you into a particular tutorial session in 'exceptional circumstances' and there is **NO GUARANTEE** that you will get your requested tutorial time.

Tutorials start on the first week of the course. As there is a maximum of 15 students per tutorial class you are encouraged to sign up early. Placement into a tutorial will be strictly on a first-come-first-served basis. Confirmation of your tutorial group will be posted on Blackboard by 5pm Tuesday 17th July 2007. If you have any serious problems about the allocations see the Tutorial Coordinator ASAP.

READINGS

The *required* textbook is:

Powell SG & Baker KR (2007). Management Science: The Art of Modeling with Spreadsheets. 2nd ed. Wiley, USA.

Another suitable textbook is:

Ragsdale, CT. (2001). Spreadsheet Modelling and Decision Analysis, Cincinnati: South-Western College Publishing.

[the library contains a number of similar textbooks]

A selection of additional readings will be made available to students in class or from Rutherford House.

Students are expected to familiarise themselves with the set of suggested readings, and where directed, to have prepared topics in advance of classes/tutorials, being ready to discuss the issues which the readings present.

ASSESSMENT REQUIREMENTS

Assignment	Title	Weight	Date	
1	Decision Analysis Case	25%	7 September 2007	
2	Business Forecasting Case	25%	12 October 2007	
3	Tutorial & Workshop Activities Participation	10%	Weeks 3 to 6, & 8 to 11.	
4	Final Examination	40%	19 October to 10 November 2007	
	TOTAL	100%		

1 & 2 Assignments

There will be two (2) assignments (25 marks each) worth 50% in total

Assignment 1: due Friday, 7 September 2007 by 5pm - Decision Analysis Case (25 marks)

Marks: 50%

Assignment 2: due Friday, 12 October 2007 by 5pm - Business Forecasting Case (25 marks)

Students will prepare two copies of each assignment, keeping the second copy for their own reference and for use during the course. Students must also keep an electronic copy of their assignment.

You may discuss in general how one might respond to the nature of the assignment questions with other students; but reports must be your own work. These assignments must be written as management reports, with a maximum of 2,500 words not including appendices.

Tutorial & Worksop Contributions

Marks: 10% The grade will depend on the student's preparation for, and quality of the contribution to, tutorial and workshop activities and discussions. Students should prepare in advance of the tutorial, as indicated by the lecturer, and should be prepared to discuss the issues and activities with the rest of the tutorial/workshop group in a supportive, positive manner.

4 Examination **Marks: 40%**

The examination will be held during the period 19 October to 10 November 2007 inclusive.

The examination is worth 40% of the total marks available for this course. It is an closed book 3hour examination. All material covered on the course will be examinable, and questions will include a mixture of problems to be worked, case-based questions, and essay questions.

Calculators may be used in the exam, but computers and communication devices are not permitted.

HANDING IN ASSIGNMENTS:

Assignments should be dropped in the MGMT 316 Box no. 23 on the Mezzanine Floor of Rutherford House (Pipitea Campus) in hard copy form by the due time on the due date. All completed assignments must have a cover sheet. The cover sheet is in Annex B. Students must also keep an electronic copy of their work archived in case the original assignment goes missing. Failure to do so will jeopardise any claim by you that your work was submitted in the rare cases where your work goes astray.

MANDATORY COURSE REQUIREMENTS

To meet Mandatory Course Requirements, students are required to:

- (a) Attend at least 6 out of the 8 tutorial and workshop sessions;
- (b) Submit both assignments; and
- (c) To obtain at least 40 per cent (i.e. 16 marks out of 40) of the final examination marks available.

Students who fail to satisfy the mandatory requirements for this course but who obtain 50% or more overall, will be awarded a "K" grade.

Standard fail grades (D or E) will be awarded when the student's overall course mark falls below the minimum pass mark, regardless of whether the mandatory course requirements have been satisfied or not.

Notice of Failure to meet Mandatory Course Requirements will be posted on Blackboard or on the Mezzanine Floor Notice-board.

PENALTIES- FOR LATENESS & EXCESSIVE LENGTH OF ASSIGNMENTS

- (i) In fairness to other students, work submitted after any deadline will incur a penalty for lateness. The penalty is 2 of the marks available (marks available means what the assignment is worth i.e. 20% or 20 marks) for an assignment submitted after the due time on the due date for each part day or day late. (for example if an assignment is out of 20 and the assignment receives 50% then one day late means the mark will be out of 18 and the student will receive 50% of 18). Saturdays, Sundays and public holidays will be included when counting the number of days late. Assignments received more than 7 days after the due date will not be accepted and the student will automatically fail the Mandatory Course Requirements.
- (ii) Course Outlines provide a signal to student of forthcoming workload, dates of submission etc, and thus student study plans should take account of course requirements across all courses. Consequently, workload issues related to other courses and employment will not be accepted as reason for dispensation from mandatory requirements or waiver of penalties. **Extensions** to submission deadlines for any assigned work will only be granted in **exceptional circumstances.**
- (iii) Students who are unable to comply with any of the mandatory requirements should make a written application for an extension to the due date for submission of assigned work or for waiver of a penalty, **in advance**, to the **Course Coordinator**, providing documentary evidence of the reasons of their circumstances.

 All such applications must be made **before** the deadline and be accompanied by documentary evidence, eg a medical certificate, or counsellor's report that indicates the degree of impairment, and for how long the student has been impaired. Please be sure to ask at the time of consultation for the degree of impairment to be stated in any certificate you provide to support your case.
- (iv) In the event of unusual or unforeseeable circumstances (e.g. serious illness, family bereavement or other exceptional events), that precludes an application in advance, students should make contact with the **Course Coordinator** as soon as possible, and make application for waiver of a penalty as soon as practicable.
- (v) Word limits should be adhered to, especially so when they provide a guide to limiting the student's coverage of a topic. The penalty will be 5% of the grade for an assignment which is 10% over the word limit.

GRADING GUIDELINES

The following broad indicative characterisations of grade will apply in grading assignments and the exam:

A+ excellent performance in all respects at this level
A excellent performance in almost all respects at this level
A- excellent performance in many respects at this level

B+ very good, some aspects excellent

B, B- good but not excellent performance at this level

C+, C work satisfactory overall but inadequate in some respects

D poor performance overall, some aspects adequate

E well below the required standard

K failure to achieve mandatory course requirements and have achieved at least

an average "C" over all the assessment. Note this is a failing grade.

POLICY ON REMARKING:

Every attempt is made to ensure that the marking is consistent across tutors and fair to students. Students may ask for their written work to be remarked. A different tutor will do the remarking and provide comments. The original marking sheet is removed to ensure the process is independent. If the mark differs by 10% or less the two marks are averaged. If it exceeds 10% then it is independently marked by a third marker and the average of the two closest marks is taken. Experience from previous

years is that almost all remarks are within 10% and where there is a change in mark, half the assignments go up and half go down. Occasionally there is a significant shift in the mark.

Application for remarks must be made within 5 days after the marks are available. To apply for a remark, complete the request for re-examination of assessed work form stating which sections (criteria listed in the mark sheet) you wish re-examined. Write on why you think the mark does not, in your view, fairly reflect the quality of your work. Hand this with your assignment into the following place:-

• Pipitea Campus – the Reception Desk on Level 10 Rutherford House where your assignment will have the **time**, **date and signature** noted on the front cover by the person receiving it.

Allow up to 5 days for remarks to be completed.

REFERENCING

There are many different styles of referencing and the Faculty of Commerce & Administration at VUW has decided to make APA (American Psychological Association) referencing style the common standard across the Faculty. The Commerce and Central Libraries hold the APA Style Guide. You can also access the information from the online VUW library site (http://www.vuw.ac.nz/library/research/reference/referencingguides.aspx).

COMMUNICATION

Information on course-related matters will be announced at class and posted on the **Blackboard** website at http://blackboard.vuw.ac.nz/. It will be crucial for you to regularly check Blackboard for messages, announcements and materials.

EMAIL CONTACT

Students wishing to contact staff by email should adhere to the following instructions:

Include the **Course Code**, your **Name**, your **Student ID** and the **Topic** in the subject area of the email, eg MGMT316 Smith Pauline 3000223344 Ass1 Query

All students must use their VUW SCS email account and ID. Otherwise, email will be classified as Spam and will be dumped without being read. All emails with attachments will be dumped, unless requested by staff.

FACULTY OF COMMERCE AND ADMINISTRATION OFFICES

Railway West Wing (RWW) - FCA Student and Academic Services Office

The Faculty's Student and Academic Services Office is located on the ground and first floors of the Railway West Wing. The ground floor counter is the first point of contact for general enquiries and FCA forms. Student Administration Advisers are available to discuss course status and give further advice about FCA qualifications. To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

Easterfield (EA) - FCA/Education/Law Kelburn Office

The Kelburn Campus Office for the Faculties of Commerce and Administration, Education and Law is situated in the Easterfield Building - it includes the ground floor reception desk (EA005) and offices 125a to 131 (Level 1). The office is available for the following:

- Duty tutors for student contact and advice.
- Information concerning administrative and academic matters.
- Forms for FCA Student and Academic Services (e.g. application for academic transcripts, requests for degree audit, COP requests).
- Examinations-related information during the examination period.

To check for opening hours call the Student and Academic Services Office on (04) 463 5376.

General University Policies and Statutes

Students should familiarise themselves with the University's policies and statutes, particularly the Assessment Statute, the Personal Courses of Study Statute, the Statute on Student Conduct and any statutes relating to the particular qualifications being studied; see the Victoria University Calendar or go to www.vuw.ac.nz/policy.

For information on the following topics, go to the Faculty's website www.vuw.ac.nz/fca under Important Information for Students:

- Academic Grievances
- Academic Integrity and Plagiarism
- Student and Staff Conduct
- Meeting the Needs of Students with Impairments
- Student Support

Manaaki Pihipihinga Programme

Manaaki Pihipihinga is an academic mentoring programme for undergraduate Māori and Pacific students in the Faculties of Commerce and Administration, and Humanities and Social Sciences. Sessions are held at the Kelburn and Pipitea Campuses in the Mentoring Rooms, 14 Kelburn Parade (back courtyard), Room 109D, and Room 210, Level 2, Railway West Wing. There is also a Pacific Support Coordinator who assists Pacific students by linking them to the services and support they need while studying at Victoria. Another feature of the programme is a support network for Postgraduate students with links to Postgraduate workshops and activities around Campus.

For further information, or to register with the programme, email manaaki-pihipihinga-programme@vuw.ac.nz or phone (04) 463 5233 ext. 8977. To contact the Pacific Support Coordinator, email pacific-support-coord@vuw.ac.nz or phone (04) 463 5842.

Annex A

MGMT 316 Decision Modelling for Managers Course Content & Schedule, 2007

Week no.	Week start	Topic	Readings (1), (2)	Lecture (Friday)	Tutorial & Comp Lab (Wed / Thurs)	Assignment Due
1	9 Jul	Course Overview	Ch 1 & 2	Modelling & the decision making process Hard and soft modelling	_	
2	16 Jul	Data Analysis	Ch 3, 5 & 6	Spreadsheet modelling & management applications Business statistics review	_	
3	23 Jul	Managing Resources	Ch 11	Optimisation solutions with linear programming (LP) Allocation, covering & blending models Graphical solution methods	1. Data analysis	
4	30 Jul	Decision & Policy	Ch 14 & App. on probability	Making decisions with uncertain or risky outcomes Payoff tables & decision criteria	2. Resource allocation	
5	6 Aug	Analysis	Ch 14	Decision tree analysis 'What if' analyses using Excel Data Tables Using Prospect theory	3. Decision analysis	
6	13 Aug	Managing Variability	Ch 15	Using simple models to aid decisions involving unpredictability, variability and random events	4. Decision analysis	
	1		MI	D-TRIMESTER BREAK		
7	3 Sep		Ch 7 & 8	Simple linear regression Hypothesis testing	_	Asst 1 due Friday, 7 Sep
8	10 Sep	Forecasting & Planning	Ch 9	Time series analysis Analysing trends & cycles Measuring forecasting accuracy	5. Forecasting	
9	17 Sep	C	Ch 8	Multiple regression Correlation	6. Forecasting	
10	24 Sep	Simulation o.	Ch 15	Monte Carlo simulation Risk & sensitivity analysis	7. Forecasting	
11	1 Oct	& Scenario Analysis	Handouts	Discrete & continuous simulation Scenario modelling	8. Simulation	
12	8 Oct	Course Review	Handouts	Model validation Other decision modelling issues	_	Asst 2 due Friday, 12 Oct

⁽¹⁾ The readings are from the text book Powell SG & Baker KR (2007). Management Science: The Art of Modeling with Spreadsheets. 2nd ed. Wiley, USA.

(2) Other readings will be distributed in class.

Annex B

VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wānanga o te Ūpoko o te Ika a Māui



Victoria Management School

MGMT 316 Assignment Cover Sheet

Assignment No. _____

Name:	Student ID:				
Tutor's Name:	Tutorial Number:				
Tutorial Day:	Tutorial Time:				
Date Due: Date Submitted:					
I have read and understood the university policy I declare this assignment is free from plagiarism					
Signed:					
Extension of the due date (if applicable)					
Please attach a copy of the note authorising your extension.					
Date extension applied for:					
Extension granted until:					
Extension granted by:					