

Victoria Management School

**MGMT 206 SYSTEMS THINKING & DECISION MAKING**

Trimester One 2010

**COURSE OUTLINE**

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**CONTACT DETAILS**

**COURSE COORDINATOR**

**A/Prof Bob Cavana**

Room: RH 904, Rutherford House

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Email: [bob.cavana@vuw.ac.nz](mailto:bob.cavana@vuw.ac.nz)

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**LECTURER**

**Dr Jim Sheffield**

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**ADMINISTRATOR**

**Luisa Acheson**

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**TUTORIAL COORDINATOR**

**Garry Tansley**

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**Trimester Dates**

Teaching Period: Monday 1<sup>st</sup> March – Friday 4<sup>th</sup> June 2010

Study Period: Monday 7<sup>th</sup> June – Thursday 10<sup>th</sup> June 2010

Examination Period: Friday 11<sup>th</sup> June – Wednesday 30<sup>th</sup> June 2010 (inclusive)

**Withdrawal from Courses:**

Information available via

Withdrawal dates: Late withdrawals with Associate Dean (Students) permission

(See Section 8: Withdrawals - from the Personal Courses of Study Statute)

<http://policy.vuw.ac.nz/Amphora!~~policy.vuw.ac.nz~POLICY~000000001743.pdf>

Withdrawal dates: refunds:

<http://www.victoria.ac.nz/home/admisenrol/payments/withdrawalsrefunds.aspx>

**Class Times and Room Numbers**

Lecture: Tuesday 3:40 – 4:30pm (RH LT 1)

Lecture: Thursday 3:40 – 4:30pm (RH LT 1)

Tutorials will occur in Weeks 2 to 4 and Weeks 7 to 10. Tutorial exercises will be provided in class and made available on Blackboard.

Tutorial signup is done through the online programme; 'S-Cube'. You should have been notified by email about how to sign-up to a tutorial using this system. Go to the signup website at: <https://signups.vuw.ac.nz> and enter your SCS username and password to log into the system. Click on MGMT206 and follow the instructions. If you have been unable to sign up by the end of the first week please contact the Tutorial Coordinator.

## **INTRODUCTION**

The course will examine aspects of systems thinking and how they relate to decision making in a managerial context. It will provide an introduction to a range of systems thinking and decision making approaches, and provide an understanding of how everyday situations can be better managed.

The course will 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. The emphasis is on taking a managerial view of the situation, and seeking to find solutions to typical decision problems and how they can be approached differently using systems thinking in such a way that organisational performance as a whole is improved. In particular, the course will challenge students to think critically and systemically about issues that confront managers in the fields of managing change, managing resources, managing projects, and in general, managing in situations where uncertainty unfolds over time.

## **Programme and Course-related Learning Objectives**

Our graduates will:

1. demonstrate application of critical and creative thinking skills to practical and theoretical problems
2. be effective communicators
3. have a global and multicultural perspective
4. recognise, support and display leadership
5. develop specific knowledge and skills in systems thinking and decision making.

## **Course-related Student Learning Objectives**

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

1. Interpret major systems frameworks, concepts and conceptual vocabulary underpinning successful management problem-solving and decision analysis;
2. Critically analyse different systems frameworks and use them to examine managerial issues;
3. Identify key elements of managerial decision situations, and develop robust solutions;
4. Describe the importance of critical analysis, leadership and communication in managerial problem solving and decision making using systems thinking.

The assessment for this course comprises a group systems thinking assignment, an individual management decision making based assignment, assessment of preparation and participation at tutorials, and a final examination. Each piece of assessment involves a combination of the learning objectives outlined above.

## **Expected Workload**

A total of 150 hours of work is expected from students in this course. That consists of 24 hours of classes, 7 hours of tutorials, 8 hours per week outside classes during teaching weeks spent reading, studying and writing assignments, and a further 23 hours revising during the mid-trimester break and study week.

## **Readings**

The text for the first part of the course will be:

Maani KE and Cavana RY. *Introduction to Systems Thinking*, Pearson Education, Auckland, 2009.

However, for students planning to advance onto MGMT 315 ‘Systems Thinking and Modelling’, we recommend that you purchase a copy of:

Maani KE and Cavana RY. *Systems Thinking, Systems Dynamics: Managing Change and Complexity*, 2<sup>nd</sup> Edition, Pearson Education, Auckland, 2007.

Readings listed in the course schedule will be distributed in class, and students are expected to read these as indicated on the course schedule. Further resources are available in the VUW Commerce Library.

### MGMT 206: Weekly Schedule 2010

<b>Week Dates</b>	<b>Lecturer</b>	<b>Topics</b>	<b>Readings (* = textbook)</b>	<b>Tutorials</b>
<b>W1</b> 2, 4 Mar	<b>BC</b>	Course Overview <b>Intro to Systems Thinking</b> <ul style="list-style-type: none"> <li>Decision processes &amp; models</li> <li>Problem structuring</li> </ul>	1. Gore, Murray & Richardson (1992) 2. Dearlove (1998); 5. Daellenbach (1994) * Maani & Cavana (2007), Ch 1 & 2	<i>No Tutorial</i>
<b>W2</b> 9, 11 Mar	<b>BC</b>	<ul style="list-style-type: none"> <li>Causal loop diagrams</li> <li>Behaviour over time charts</li> </ul>	* Maani & Cavana (2007) Ch 3, pp28-39, 52-58, & Case 1. 6. Cavana, Boyd & Taylor (2007) 9. Sterman (2000)	Tutorial 1
<b>W3</b> 16, 18 Mar	<b>BC</b>	<ul style="list-style-type: none"> <li>Systems archetypes</li> <li>Group model building</li> </ul>	10. Senge (1990) 9. Sterman (2000) * Maani & Cavana (2007) Ch 3, esp. pp39-51, Ch 7 & Case 3	Tutorial 2
<b>W4</b> 23, 25 Mar	<b>BC</b>	<b>Decision Analysis</b> <ul style="list-style-type: none"> <li>Review of probability concepts</li> <li>Payoff tables</li> </ul>	11. Target (1996) Ch 3 12. Ragsdale (2008) Ch 15	Tutorial 3
<b>W5</b> 30 Mar, 1 Apr	<b>BC</b>	<ul style="list-style-type: none"> <li>Decision trees</li> <li>Sensitivity analysis</li> <li>Policy analysis</li> </ul>	11. Target (1996) Ch 3 12. Ragsdale (2008) Ch 15 8. Cavana (2004)	<i>No Tutorial</i> <b>Assignment 1, due 3pm Thursday 1<sup>st</sup> April</b>
<b>Mid-Trimester</b>			<b>Break</b>	
<b>W6</b> 20, 22 Apr	<b>JS</b>	<b>Constraint Management</b> <ul style="list-style-type: none"> <li>Five Focussing Steps</li> <li>Resolving conflict</li> </ul>	Goldratt (1994) Goldratt (1997)	<i>No Tutorial</i>
<b>W7</b> 27, 29 Apr	<b>JS</b>	<ul style="list-style-type: none"> <li>Conflict Resolution Tree</li> <li>The Prerequisite Tree</li> </ul>	Scheinkopf (1999) Gupta Boyd and Sussman (2004)	Tutorial 4
<b>W8</b> 4, 6 May	<b>JS</b>	<ul style="list-style-type: none"> <li>Evaporating Cloud Conflict Resolution Technique</li> </ul>	Goldratt and Cox (2000)	Tutorial 5
<b>W9</b> 11, 13 May	<b>JS</b>	<ul style="list-style-type: none"> <li>Current Reality Tree</li> <li>Future Reality Tree</li> </ul>	Bleach-Wood et al (2005) Demmy and Demmy (1994) Umble and Umble (2006)	Tutorial 6
<b>W10</b> 18, 20 May	<b>JS</b>	<b>Managing projects</b> <ul style="list-style-type: none"> <li>Critical Path Scheduling</li> </ul>	Newbold (1998)	Tutorial 7
<b>W11</b> 25, 27 May	<b>JS</b>	<ul style="list-style-type: none"> <li>Critical Chain Scheduling</li> </ul>	Srinivasan (2007)	<b>Assignment 2, due 3pm Wednesday 26 May</b>
<b>W12</b> 1, 3 Jun	<b>JS / BC</b>	<b>Integration</b> <ul style="list-style-type: none"> <li>Course review</li> <li>Exam briefing</li> </ul>		<i>No Tutorial</i>

\* Key to Lecturers: BC = Bob Cavana, JS = Jim Sheffield

## Assessment Requirements

Assignment	Title	% of Marks Available	Due Date
1	Group systems thinking project (a) Group report (b) Individual reflections essay	15% 5%	<b>3pm, Thursday 1<sup>st</sup> April</b>
2	Individual Assignment	20%	<b>3pm, Wednesday 26<sup>th</sup> May</b>
3	Tutorial contributions	10%	
4	Final Examination	50%	In exam period: Friday 11 <sup>th</sup> June – Wednesday 30 <sup>th</sup> June
	<b>TOTAL</b>	<b>100%</b>	

A student's overall grade in the course will be determined in the following manner:

### 1. Group systems thinking project

**Due: 3pm Thursday 1<sup>st</sup> April**

#### **(a) Group report [15%, 2,000 word limit]**

This will involve working in a small group of students from your tutorial, normally 3 - 4 students per group, decided by the tutors/tutor coordinator. All members of the group are expected to contribute and perform a fair share of the work towards this assignment. This assignment will be based on weeks 1 to 3 on the 'systems thinking' material. Further details will be discussed in class and provided on Blackboard.

The group will prepare a copy of the assignment to hand in, keeping separate printed copies for each student's own reference and for use during the course. All students must also keep an electronic copy of the group assignment.

On the cover page, the members of the group should be identified and a statement made that either all members have on balance contributed equally, or the relative contributions of the members should be stated. All members of the group will receive the same mark unless the group advises that their contributions are unequal, in which case the lecturer will make an appropriate adjustment.

If it becomes clear that the group dynamics will preclude the group from submitting an effective group report, group members should discuss the matter immediately with the lecturer. If necessary to ensure that no student is unfairly disadvantaged, the lecturer will permit some or all members of the group to submit an individual report, of a defined subset of the project.

#### **(b) Individual reflections essay [5%, 600 word limit]**

This will require each student to submit a short essay containing reflections on the group systems thinking project, their contributions to the project and any specific insights they have gained from the project.

## **2. Individual Assignment [20%, 2,500 word limit]**

**Due: 3pm, Wednesday 26 May**

This assignment will be based on the 'constraint management' material covered in Weeks 6 to 9. Since this is an individual 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**. Further details will be discussed in class and provided on Blackboard.

Students must prepare two copies of this individual 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.

## **3. Tutorial Contributions [10%]**

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

Marks will be given for the best 5 out of 7 tutorials taking both preparation and participation into account. Preparation will be assessed as acceptable/not acceptable, each tutorial, and will count towards 5 out of the 10 tutorial marks available. Participation will be marked based on quality of contributions, and also account for 5 out of the 10 tutorial marks available. Indicative feedback on your tutorial performance will be posted on Blackboard by the end of Week 5.

## **4. Examination [50%]**

Examination dates for trimester one: Friday 11<sup>th</sup> June – Wednesday 30<sup>th</sup> June 2010 (inclusive). Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period.

The examination is worth 50% of the total marks available for this course. It will be a closed book 3-hour 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. More information will be given in lectures and posted on Blackboard.

**Overall Pass Mark** – The overall pass mark for the course will be **50%** of the total marks available ie 50 marks.

### **Handing in assignments:**

Assignments should be dropped in the MGMT 206 Box (Number 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 sheets are provided in Annex's A & B.

Assignments received after the due time will be deemed to be late, and must be handed to the Administrator for this course in RH912 where your assignment will have the **time, date and signature** noted on the front cover by the person receiving it.

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. Submit both assignments; and
- b. Obtain at least 40 per cent of the marks available (i.e. 20 marks out of 50) for the final examination.

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.

### **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 students 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 **Tutorial 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 clearly stating the degree of impairment, and the dates the illness or event prevented you from undertaking your academic studies. This can be applied retrospectively.

- (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 **Tutorial Coordinator** as soon as possible, and make application for waiver of a penalty as soon as practicable.

- (v) The ability to write in an economical style is a skill that is valued in both academic and business settings and therefore word limits should be strictly adhered to. +/- 10% is acceptable. Beyond that, **a penalty may be applied.**

### **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 (Annex B) 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 – Room 912, Level 9 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>).

### **Class Representative**

A class representative will be elected in the first class, and that person's name and contact details will be available to VUWSA, the Course Coordinator and the class. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

### **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

MGMT206\_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.

**For the following important information follow the links provided:**

### **Academic Integrity and Plagiarism**

<http://www.victoria.ac.nz/home/study/plagiarism.aspx>

### **General University Policies and Statutes**

<http://www.victoria.ac.nz/home/about/policy>

### **AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support**

[http://www.victoria.ac.nz/home/about\\_victoria/avcacademic/Publications.aspx](http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx)

### **Faculty of Commerce and Administration Offices**

<http://www.victoria.ac.nz/fca/studenthelp/>

### **Manaaki Pihipihinga Programme**

[http://www.victoria.ac.nz/st\\_services/mentoring/](http://www.victoria.ac.nz/st_services/mentoring/)



**ANNEX A MGMT 206 GROUP Assignment Cover Sheet**



**Victoria Management School**

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Tutor's Name: \_\_\_\_\_ Tutorial Number: \_\_\_\_\_

Tutorial Day: \_\_\_\_\_ Tutorial Time: \_\_\_\_\_

Date Due: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

*We, the undersigned, have read and understood the university policy on Academic Integrity and Plagiarism. I declare this assignment is free from plagiarism.*

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

**We agree to an equal share of the marks awarded Yes / No (Please circle)**

**If No, please attach a letter detailing your preferred split of marks, signed by all group members.**

**If an extension has been granted, please attach a copy of the note authorising your extension.**

*Date extension applied for:* \_\_\_\_\_

*Extension granted until:* \_\_\_\_\_

*Extension granted by:* \_\_\_\_\_

**ANNEX B MGMT 206 Individual Assignment Cover Sheet**



**Victoria Management School**

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 on Academic Integrity and Plagiarism.  
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: \_\_\_\_\_