
School of Management

MGMT 206 SYSTEMS THINKING AND DECISION MAKING

Trimester One 2013

COURSE OUTLINE

NAMES AND CONTACT DETAILS

COURSE COORDINATOR

Dr Arun Elias
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ACADEMIC STAFF

Professor John Davies
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Professor Vicky Mabin
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PROGRAMME MANAGER

Garry Tansley
Room: EA118 (Monday & Friday)
Room: RH915 – (Tues, Wed & Thursday)
Phone: 463-6968
Email: Garry.Tansley@vuw.ac.nz

ADMINISTRATOR

Tricia Lapham
Room: RH1022, 10th floor reception,
Phone: 463 5397
Email: Tricia.Lapham@vuw.ac.nz

Trimester Dates

Teaching Period:	Monday 4 March	– Friday 7 June
Study Period:	Monday 10 June	– Thursday 13 June
Examination Period:	Friday 14 June	– Wednesday 3 July (inclusive)

Class Times and Room Numbers

Lecture Room: RHLT1 Day: Tuesdays Time: 12.40 – 14.30

Tutorial sign-up is online through 'S-Cube'. In the event of a clash, contact Garry Tansley.

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before 15 March 2013.
2. The standard last date for withdrawal from this course is Friday 17 May. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an 'Application for Associate Dean's Permission to Withdraw Late' including supporting documentation.

The application form is available from either of the Commerce Faculty's Student Customer Service Desks at Kelburn (EA121) and Pipitea (Ground floor Rutherford House).

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 conflict, and in general, managing in situations which unfold over time, and where sustainability of growth, success, resources etc, is an issue.

Please note that due to the nature of the lectures it is helpful for you to have worked through the relevant readings pertaining to the lecture before you turn up so that you are able to discuss issues, theories, frameworks and concepts with your classmates and the lecturer. Please see last page of this course outline for the lecture & tutorial schedule.

BCom 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 Learning Objectives

Objective	By the end of this course, students should be able to:	Addressed via
CLO1	Demonstrate an understanding of relevant systems thinking and problem-solving concepts and frameworks;	Assignment 1 & 2, Tutorials and Exam
CLO2	Apply different systems thinking and problem-solving frameworks to describe and develop an understanding of problematic decision situations in a variety of managerial and organisational contexts;	Assignment 1 & 2, Tutorials and Exam
CLO3	Demonstrate critical and creative thinking skills through selection and use of a range of systems thinking and problem solving frameworks to develop solutions to problematic situations;	Assignment 1 & 2, Lectures, Tutorials and Exam
CLO4	Demonstrate communications skills using both written and diagrammatic representations to convey understanding developed through the use of systems thinking and problem-solving frameworks;	Assignments 1 & 2, Tutorials and Exam
CLO5	Demonstrate an ability to work constructively in groups to develop systems thinking and problem solving skills;	Lectures and Tutorials
CLO 6	Develop an appreciation of issues and concepts relevant to managing in operational contexts.	Assignment 1 & 2, Lectures, Tutorials and Exam

Course Delivery

The course consists of two one hour lectures per week and one tutorial per week. Lectures are run over all 12 weeks of the course and tutorials are run over nine weeks of the course. There is an expectation that students will attend all lectures and tutorials offered. Lectures will start in week one of the course and tutorials in week three of the course.

Expected Workload

A total of 150 hours of work is expected from students in this course. That consists of 32 hours of classes and tutorials, eight hours per week outside classes during teaching weeks spent reading, studying, preparing for tutorials and writing assignments, and a further 34 hours revising during mid-trimester break and exam preparation.

Readings

Recommended course textbooks:

- Maani, K. E., & Cavana, R.Y. (2010). *Introduction to Systems Thinking*. Auckland: Pearson Education (NZ) Ltd. *
- Goldratt, E. M., & Cox, J. (2012). *The Goal*. 3rd Edition. Great Barrington, MA: North River Press. (2nd edition is also suitable).

Both textbooks will be available at the Victoria Book Centre. Copies are also available in the Library.

*For students planning to advance onto MGMT 315 'Systems Thinking and Modelling' in 2013, we recommend that, instead of *Introduction to Systems Thinking*, you purchase a copy of: Maani, K. E., & Cavana, R.Y. (2007). *Systems Thinking, Systems Dynamics: Managing Change and Complexity*. Auckland: Pearson Education (NZ) Ltd.

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

Additional Readings and References

Also listed in the course schedule will be a selection of Additional Readings (providing further examples, illustrations, cases etc.) and References (i.e. materials that can be referred to as additional sources of work of substance).

These additional materials will also be made available to students via Blackboard.

As stated above, 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.

Materials and Equipment

Students will not be allowed to use electronic devices such as computers or electronic calculators in examinations.

Student workbooks will be provided for material starting in Week 6 and Week 10.

Assessment

The assessment for this course comprises two Systems Thinking assignments, the first assignment focussing on applying Causal Loop Diagram representations (CLDs) and Systems Archetypes; the second focussing on applying tools of the Theory of Constraints (TOC).

It also includes the preparation and participation at tutorials, and a final examination. The examination will require the integration of different systems approaches, for example, linking the CLD approach with the TOC approach, and applying theory to practice.

Each piece of assessment involves a combination of the learning objectives outlined above.

Assessment Requirements

1 Tutorial Preparation and Participation

up to 10 marks

Participation in tutorials is crucial to the learning process on this course. This is essentially a participation mark, not an attendance mark. The grade will depend on the student's preparation for, and then the extent and quality of the contribution to tutorial class exercises and discussions. Students will be expected to provide a one-page summary of their work to their tutor at the start of the tutorial, or bring along their completed workbook when asked to.

To gain any tutorial marks you must attend six (6) of the tutorials offered. The tutorials are held as shown in the schedule (in weeks 3, 4 & 5 before the mid-term break, and weeks 7, 8, 9, 10 & 11 following the mid-term break).

If you attend five (5) or fewer tutorials, you will receive no marks for tutorial preparation and participation.

In the Week 6 tutorial time slots, you will be given the opportunity to watch the movie of *The Goal* to complement your reading of *The Goal* book; and to aid preparation for Tutorials in Weeks 7 & 8, and Assignment 2.

You will be assessed on your ability to develop your management competencies through preparation and participation in tutorials. The demonstrated quality of your **written preparation** and participation for six (6) tutorials will guide the outcome of your preparation and participation marks. The assessment of participation will be based on the following criteria:

Participation	Mark range
No or minimal participation	0-2
Demonstrates a limited understanding of the discussion topics	3-4
Initiates ideas and builds on the ideas of others	5-6
Provides insightful observations on theory and practice	7-8
Provides a significant contribution to the learning of others	9-10

Tutorial activities contribute to Course Learning Objectives 1, 2, 3, 4, 5, and 6.

2 Term Work

Assignments – Case Reports

There will be **two (2) Assignments – Case Reports - totalling**

up to 40 marks

Assignment 1: due Tuesday, 9 April 2013 - at class - ST Case 1 up to 20 marks

Assignment 2: due Tuesday, 28 May 2013 - at class - ST Case 2 up to 20 marks

For Assignments 1 & 2, you will be asked to present a Case Report setting out your description of a problematic situation using systems diagrams and narrative, showing how the systems representation may lead to appropriate intervention.

These assignments require demonstration of insight developed from the use of systems thinking, and the benefits of using a systems approach. Instructions and marking guidelines for Assignments 1 and 2 will be made available on Blackboard.

The Assignments contribute to Course Learning Objectives 1, 2, 3, 4, 5 and 6.

3 Examination

up to 50 marks

The exam is worth 50% of the marks available for this course. The exam will be closed book and will be 3 hours in duration. As a mandatory course requirement, students are required to obtain at least 40 per cent (i.e. 20 marks out of 50) of the final examination marks available.

Preparation for the Examination contributes to Course Learning Objectives 1, 2, 3, 4 5 and 6.

Examination Obligations

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 final examination for this course will be scheduled at some time during the period from Friday 14 June – Wednesday 3 July 2013.

Use of Assessed Work for Quality Assurance Purposes

Please note that your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of FCom programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

Mandatory Course Requirements

To meet Mandatory Course Requirements, students are required to:

- a. To obtain any tutorial marks you must attend at least six (6) of the tuts offered.
- b. Submit Assignment 1 hard copy for marking.
- c. Submit Assignment 2 hard copy for marking.
- d. Submit all assignments within the allowable timeframe (see under **Penalties and General University Policies and Statutes** below); and
- e. Obtain at least 40 per cent (i.e. 20 marks out of 50) of the final examination marks available.

Note: Failure to meet mandatory requirements does not prevent a student completing other pieces of assessment, including sitting the final examination.

Tutorial Signup

Tutorial signup is done through the online programme; 'S-Cube'.

You should already have been notified by email about how to sign-up to a tutorial using this system.

Go to the signup website at: <https://signups.victoria.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 of the course please contact the Programme Manager, Garry Tansley.

Handing in assignments:

Assignments should be handed in at the start of class, **on the due date**. Assignments received after the due time will be deemed to be late.

All completed assignments must have a cover sheet. The cover sheet is provided in Annex A.

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.

Late assignments

Late assignments are to be handed in at **Level 10 Reception**, during Reception Desk hours, **9am till 5pm Monday to Friday during term time**. The Administrator for the course or Duty Receptionist will stamp the assignment with the date and time. Late assignments that do not have **the time and date and signed by** the Administrator or Duty Receptionist, will incur late penalties from the time the Administrator receives it. Assignments left on the Reception Counter, or slid under the door of the Administrator's office will also incur penalties from the time and date they are recovered. Note that there is no provision to accept assignments on weekends or public holidays.

Penalties – for Lateness

- (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 **Programme Manager**, providing documentary evidence of the reasons of their circumstances.
All such applications must be made **before** the deadline and be accompanied by documentary evidence, e.g. 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 **Programme Manager** 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 and the intended assignment work load. You are strongly advised to adhere to the word limit so as to keep your workload at a manageable level. Any material that is above the word limit may not be taken into account by the marker. Your marker will simply stop at the maximum words for the assignment and you will receive the appropriate grade.

Referencing

There are many different styles of referencing and the Faculty of Commerce 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>).

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 markers and fair to students. Students may ask for their written work to be remarked. A different marker 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** – 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.

Class Representative

A class representative will be elected in the first class, and that person's name and contact details made 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

As you will learn from MGMT papers, good communication is crucial to the success of any organisation, especially classes. Communication in this course will be conducted in face-to-face mode in the lectures, workshops and tutorials as well in on-line mode through the **Blackboard** system.

With respect to individual student questions and concerns, given the large number of students involved in this course, it would be greatly appreciated if students could observe the following etiquette. Individual questions and concerns can be addressed in tutorial sessions or by contacting your tutor. Please do not hesitate to raise an issue, as it may be a common student concern. Tutors will either respond immediately, or seek clarification and then respond. If concerns remain, then the course coordinator should be contacted.

Communication of Additional Information

Additional course information will be conveyed to students via BlackBoard (BB) and through lectures and tutorials so please check BB often and go to all tutorials and lectures.

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 should use their VUW SCS email account and ID. Otherwise, email may 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

Find key dates, explanations of grades and other useful information at www.victoria.ac.nz/home/study

Find out about academic progress and restricted enrolment at

<http://www.victoria.ac.nz/home/study/academic-progress.aspx>

The University's statutes and policies are available at www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at <http://www.victoria.ac.nz/home/study/calendar.aspx> (See Section C).

Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at

www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx

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

http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx

Faculty of Commerce Offices

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

Te Putahi Atawhai

Maori and Pacific Mentoring Programme

<http://www.victoria.ac.nz/tpa/>

Systems Thinking and Decision Making - Arun Elias, Vicky Mabin and John Davies

Week	Starting	Topic	Lecture	Readings	Tutorials	Assignments
1 AE	March Tuesday 5	Introduction to Course Introduction to Systems Thinking	Introduction to course Language of systems thinking Features of systems thinking	Maani & Cavana Chapter 1 & 2	No Tutorial	
2 AE	March Tuesday 12	Stakeholder Management: A Systems Approach	Problem structuring Complex problems Stakeholder analysis	Elias, Cavana and Jackson (2002) References Sterman (2000) Chapter 1	Tutorial 1 Case on Stakeholder Analysis	
3 AE	March Tuesday 19	Causal Loop Modelling	BOT graphs Causal loop models Feedback loops	Maani & Cavana Chapter 3 (pages 1-40) References Sterman (2000) Chapter 5	Tutorial 2 Case on Causal Loop Modelling Hand-in	
4 AE	March Tuesday 26	Systems Archetypes	Fixes that fail Shifting the burden Limits to growth	Maani & Cavana Chapter 3 (pages 40-58) Additional Reading: Senge (1994) Chapter 13 & App 2	Tutorial 3 Fixes that Fail Shifting the Burden Students' own cases Hand-in	
One Week Break						
5 AE	April Tuesday 9	Managing Operations: A Systems Perspective	Describing an operating system Analysing an operating system Improving an operating system	Jacobs & Chase (2011) Chapter 1	Screening of <i>The Goal</i> movie (see Blackboard for details)	Assignment 1 due 9 April at the start of class
6 VM	April Tuesday 16	Managing constraints I	Understanding the impact of constraints and their role in managing systems TOC Philosophy <i>The Goal</i>	<i>The Goal</i> Dettmer (2007) Chapter 1 TOC Workbook Chapter 1 Reference Jacobs & Chase (2011) Chapter 20	Tutorial 4 Principles from <i>The Goal</i> The Dice game Hand-in: Summary of TOC principles	

One Week Break						
Week	Starting	Topic	Lecture	Readings	Tutorials	Assignments
7 VM	April Tuesday 30	Managing constraints II	Five Focusing Steps (5FS) Drum Buffer Rope	Jacobs & Chase Ch 20 pp 681-682 Scheinkopf (1999) Ch 1 TOC Workbook Ch 2 References Goldratt (1997) – Ch 11/12 Mabin & Gilbertson (1994) Watson et al (2006)	Tutorial 5 Applying the Five Focusing Steps and Drum-Buffer-Rope Hand-in: Worked example of 5FS/DBR	
8 VM	May Tuesday 7	Managing Conflicts and Tradeoffs	Resolving conflicts and tradeoffs using Evaporating Clouds	Goldratt (1994) Ch 2 &3 TOC Workbook Ch 3 &4 References Dettmer (2003) Ch 6	Tutorial 6 Evaporating Clouds Hand-in: completed EC	
9 VM	May Tuesday 14	Managing Implementation	Making change happen using the Prerequisite Tree	Goldratt (1994), Ch 26 TOC Workbook Ch 6 References Scheinkopf (1999) Ch 10	Tutorial 7 Prerequisite Trees Hand-in: Completed PRT Projects Bead Game	
10 JD	May Tuesday 21	Managing Projects I	Critical Chain Project Management (CCPM)	Newbold (1998:55-72) TOC Workbook: CCPM	No Tutorial	
11 JD	May Tuesday 28	Managing Projects II Integration of Systems Approaches	CCPM Cont'd Integrating TOC, Lean and Six Sigma Multi-framing as an approach to addressing management problems	Davies, Howell & Mabin (2009) Pirasteh & Farah, 2006	Tutorial 8 CCPM Hand-in: completed CCPM example	Assignment 2 due 28 May at the start of class
12 AE/JD	June Tuesday 4	Course Review	Review and Integration of Systems Frameworks Exam Briefing			



School of Management

MGMT 206

Individual Assignment Cover Sheet

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: _____



School of Management

MGMT 206

Request for re-examination of assessed work

	Assessment affected <i>e.g. Individual Assignment, In-class Test</i>	
Student ID	Name <i>As it appears in your enrolment</i>	Tutorial No/Tutor's name
Contact Details	<i>Phone</i> _____ <i>Email</i> _____	

Specify which section (criteria specified in the mark sheet) you wish to be re-examined

Note: requests to re-examine "all" criteria will not be considered.

Clearly state why you believe each of these sections should be re-examined:

Note: "I think it is worth more," is insufficient.

In requesting a re-examination of my submitted work, I understand that the result may be an increase OR decrease in the mark obtained.

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Signature Date