TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

# VICTORIA
## UNIVERSITY OF WELLINGTON

VICTORIA MANAGEMENT SCHOOL

# MMBA 549 SYSTEMS THINKING AND CREATIVE PROBLEM SOLVING

Trimester 2 2007

## COURSE OUTLINE

**Contact Details**

> John Brocklesby
> Professor of Management Studies, Deputy Dean FCA.
> Room 906 Rutherford House

**Class Times and Room Numbers**

> 5.40pm – 7.30pm, RHGO2

> Examination period 15th Oct – 10th Nov 2007.

**Course Objectives**

One of the most enduring features of contemporary management is that complex organisational problems are rarely straightforward enough to be resolved through the application of any single theory or method, through expert knowledge of any single academic discipline, or through 'common-sense' thinking. Moreover many such problems are comprised of complex interacting elements; as a result they must be 'structured' before they can be managed.

This course is prefaced on the assumption that complexity and ambiguity are inherent features of managing. Decision makers have to accept and confront these things, not hide from them. Against this background the course does the following:

(a) Examines the nature of creative thinking about organizational problems.

(b) Considers the roots of systemic thinking in disciplines such as biology, control engineering, and the natural sciences

(c) Introduces and illustrates several systems methods and tools across three paradigms

(d) Introduces the concept of 'multimethodology' which provides a framework for the creative combination of different approaches.

**Workload**

Workload expectations for this course are 10 hours per week for the 12 teaching weeks and 30hrs during the mid-trimester break.

**Assessment Requirements**

Individual Project (50%)

Final Examination (50%)

**Penalties**

In fairness to other students, work submitted after the deadline will be subject to a penalty of 5% of the total marks available per day of lateness. In the event of unusual, unforeseen circumstances (e.g., serious illness, family bereavement), students should discuss waiver of the penalty with the course controller prior to the deadline date.

**Mandatory Course Requirements**

In order to pass this course, students are required to obtain at least forty percent of the final examination marks available, and obtain at least fifty percent of the overall course marks available.

**Victoria MBA Grading Standards are as follows:**

Excellent Category
A- (75 – 79%) to A (80 – 85%) to A+ (above 85%): The learning is demonstrated to a very high level of proficiency, i.e. it is at a standard that makes it exceptional at Master's level.

Very Good Category
B+ (70 – 74%): The learning is demonstrated at a high standard. Students have reached a level that clearly exceeds "competency".

Good Category
B (65 – 69%): The learning is clearly demonstrated without being exceptional in any way. Students can be thought of as fully competent.

Satisfactory Category
B- (60 – 64%): The learning is demonstrated without being exceptional in any way. Students can be thought of as competent.

Marginal Category
C (50 – 54%) to C+ (55 – 59%): The learning is demonstrated to a minimally acceptable level. There may be flaws but these are not serious enough to "fail" the student.

Unsatisfactory / Failure Category
E (0 – 39%) to D (40 – 49%): The learning is absent or performed to a very low level, or the performance is seriously flawed.

**Lecture Schedule (n.b. this schedule may be subject to minor changes depending upon progress)**

<u>Session</u>     <u>Topic</u>

1    **Creative and Systems Thinking in an Organisational Context**

2    **Modelling Organisations**

3    **Viable Systems Modelling I**

4    **Viable Systems Modelling II**

5    **Soft/Interpretive Systems Thinking**

6    **Soft Systems Methodology I**

7    **Soft Systems Methodology II**

8    **Strategic Options Development Analysis / Cognitive Mapping I**

9    **Strategic Options Development and Analysis / Cognitive Mapping II**

10   **Critical Systems Thinking/ Multimethodology I**

11   **Critical Systems Thinking/ Multimethodology II**

12   **Review**

**Readings**

Textbook: Michael C. Jackson 'Systems Thinking: Creative Holism for Managers' Wiley, London, 2003.

Readings, in addition to those listed below, may be provided from time to time.

**Session 1:**

M.Jackson (2003) Ch's 1, 2 and 3 <u>Systems Thinking: Creative Holism for Managers</u>, Wiley, London.

R. L. Ackoff (1994) Systems Thinking and Thinking Systems. *System Dynamics Review* 10, 175 - 188.

**Sessions 2-4:**

H. Mintzberg and L. Van der Heyden (1999) "Organigraphs: Drawing How Companies Really Work." <u>Harvard Business Review</u> Sept 1999.

M.Jackson (2003) Organisational Cybernetics, <u>Systems Thinking: Creative Holism for Managers</u>, Wiley, London.

Brocklesby, J. and S. Cummings (1996). "Designing a Viable Organization Structure." <u>International Journal of Strategic Management: Long Range Planning</u> **29**(1): 49-57.

Brocklesby, J. and S. Cummings (2003). Strategy As Systems, in <u>Images of Strategy</u>. S. Cummings and D. Wilson. London, Blackwell.

Brocklesby, J. and J. Mingers (2005). **"**The Use of the Concept Autopoiesis in the Theory of Viable Systems" <u>Systems Research and Behavioral Science</u> **22**(1): 3-9

**Sessions 5-7:**

M.C.Jackson (2003). Soft Systems Methodology, in <u>Systems Thinking: Creative Holism for Managers</u> London, John Wiley.

Checkland, P. (2003). Soft Systems Methodology. <u>Rational Analysis for a Problematic World Revisited</u>. J. Rosenhead and J. Mingers. London, John Wiley

Checkland, P. (2003). Soft Systems Methodology in Action: Participative Creation of an Information Strategy for an Acute Hospital. <u>Rational Analysis for a Problematic World Revisited</u>. J. Rosenhead and J. Mingers, London, John Wiley.

Brocklesby, J. (2007). The Theoretical Underpinnings of Soft Systems Methodology – Comparing the Work of Humberto Maturana and Geoffrey Vickers. <u>System Research and Behavioral Science</u> **24**(2): 157-168

**Sessions 8 – 9:**

Eden, C. and Ackermann, F. (2001). SODA – The Principles, <u>Rational Analysis for a Problematic World Revisted</u>. J. Rosenhead and J. Mingers, London, John Wiley & Sons**.**

Eden, C. and Ackermann, F. (2001). SODA – Journey Making and Mapping in Practice, <u>Rational Analysis for a Problematic World Revisited</u>. J. Rosenhead and J. Mingers, London, John Wiley & Sons**.**

Eden, C. and Ackermann, F. (2001). SODA – The Principles, <u>Rational Analysis for a Problematic World Revisted</u>. J. Rosenhead and J. Mingers, London, John Wiley & Sons**.**

J. Bryson, F.Ackermann, C.Eden and C.Finn (2004) What Do I Think? A Guide to Cognitive Mapping. <u>Visible Thinking: Unlocking Causal Mapping For Practical Business Results.</u> John Wiley, London.

**Sessions 10-11:**

M.C.Jackson (2003). Total Systems Intervention, in <u>Systems Thinking: Creative Holism for Managers</u> London, John Wiley.

M.C.Jackson (2003). Critical Systems Practice, in <u>Systems Thinking: Creative Holism for Managers</u> London, John Wiley.

Mingers, J. and J. Brocklesby (1997). "Multimethodology: Towards A Framework For Mixing Methodologies." <u>Omega - International Journal of Management Science</u> **25**(5): 489-509.

**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.