

School of Information Management

**INFO 409: SPECIAL TOPIC: IT, INNOVATION, VALUE &  
PRODUCTIVITY**

Trimester One 2011

**COURSE OUTLINE**

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**Names and Contact Details**

Course Coordinator	Name	Dr Val Hooper
	Room	RH 517, Rutherford House
	Tel.	463-5020
	E-mail	Val.hooper@vuw.ac.nz
	Office hours	By appointment
Course Lecturer	Name	Prof. Benoit Aubert
	Room	RH 414
	Tel.	463-6876
	E-mail	benoit.aubert@vuw.ac.nz
	Office hours	By appointment
Course Administrator	Name	Mrs Kim Hann
	Room	RH 521
	Tel.	463-5457
	E-mail	Kim.hann@vuw.ac.nz

**Trimester Dates**

Teaching period: Monday 28 February - Friday 3 June 2011

**Withdrawal from Course**

1. Your fees will be refunded if you withdraw from this course on or before 11 March 2011.
2. The standard last date for withdrawal from this course is 14 May 2011. 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 Faculty's Student Customer Service Desks.

**Class Times and Room Numbers**

Classes will be from 10:30am – 1:30pm on Wednesdays in RH GO3

## Course Content

Over the past 40 years, Information Technology (IT) has brought about profound changes, affecting individuals, organizations, and society in general. The effect of IT is obvious in the acceleration of the globalization of markets, in the transformation of social and commercial relationships, as well as in the emergence of new sources of information and competitiveness. Our notions of time and space, as well as our understanding of what is physical and what is information, have changed.

IT and Information Communications Technology (ICT) are now ubiquitous. There is a convergence of telephony, computing, networks and applications that challenges the traditional industrial boundaries. IT and ICT have had a major impact on all types of innovation, but they often require new perspectives on business models to take full advantage of their potential. This is why it is essential to understand the role of IT in the development of corporate strategy, as well as its influence on the innovation process.

The appropriate use of ICT to increase the level of productivity and the innovativeness of organizations, and therefore their competitiveness, is always difficult to determine. This course provides frameworks to help understand the complex role of ICT in the strategy development of organizations.

Lecture	Date	Topic	Deliverable	Lecturer
1	2 March	Introduction; IT and competitive advantage		Val & Benoit
2	9 March	IT and business value		Benoit
3	16 March	Creating competitive advantage		Benoit
4	23 March	IT infrastructure	Assignment 1 Presentation	Benoit
5	30 March	Strategic alignment	Presentation	Val
6	6 April	IT as a resource	Presentation	Benoit
7	13 April	Dynamic capabilities	Assignment 2 Presentation	Benoit
8	4 May	Organizational innovation	Assignment 3 Presentation	Val
9	11 May	Product/service innovation	Presentation	Val
10	18 May	Software innovation	Assignment 4 Presentation	Val
11	25 May	The world of 2.0	Presentation	Val
12	1 June	Test	Test	Val

## Course Learning Objectives

By the end of this course, students should understand and be able to apply current and emerging research knowledge about:

1. The relationship between IT investments and productivity (all weeks)
2. The relationship between IT and corporate strategy (week 1 to 3)
3. The role of IT as a resource for the organization (week 4-6-7)
4. The concept of strategic alignment (week 5)

5. The influence of IT on innovation models and how to foster innovation (week 8 to 11)
6. The relationship between innovation and productivity (week 8)
7. Approaches for IT value management (week 9)
8. Innovation in the software industry (week 10)

### **Course Delivery**

Classes will be delivered in an interactive, seminar style. Students will be required to do preparatory work for each class and participate in class discussions and presentations.

### **Expected Workload**

Students are expected to work on average 150 hours for this course. The following breakdown reflects the course structure:

- Attending lectures and test: 36 hours
- Preparing for lectures (reading the material and preparing notes): 62 hours
- Writing assignments (4): 32 hours
- Preparing presentation: 10 hours
- Studying for test: 10 hours

### **Group Work**

There will be no group work although students will often be required to discuss topics or work in groups.

### **Readings**

There is no textbook for this course but students are expected to download the following readings and prepare them for class discussion on a weekly basis.

#### **1. IT and competitive advantage - introduction**

Aubert B. and Reich, B., (2009). Extracting Value from Information Technologies, Burgundy Report, CIRANO, 38 pages. (<http://www.cirano.qc.ca/pdf/publication/2009RB-04.pdf>)

Economist Intelligence Unit. (2010). Digital economy rankings 2010 Beyond e-readiness, [26 pages].

Rubin, H. A. (2010). Return on IT: The Holy Grail of the Business Value of IT. Wall Street & Technology, 28(2), 15.

#### **2. IT and Business Value**

Subramani, M. (2004). "How Do Suppliers Benefit From Information Technology Use in Supply Chain Relationships?" MIS Quarterly, 28(1), 45-73.

Chengalur-Smith, I., Nevo, S. & Demertzoglou, P. (2010). An Empirical Analysis of the Business Value of Open Source Infrastructure Technologies. Journal of the Association for Information Systems: Special Issue on Empirical Research on Free/Libre Open..., 11(11), 708-729.

### **3. Creating competitive advantage**

El Sawy, O., Malhotra, A., Park, Y. & Pavlou, P. (2010). Seeking the Configurations of Digital Ecodynamics: It Takes Three to Tango. *Information Systems Research*, 21(4), 835-848,1001, 1004-1005.

Neirotti, P. & Paolucci, E. (2007). Assessing the strategic value of Information Technology: An analysis on the insurance sector. *Information & Management*, 44(6), 568.

### **4. IT Infrastructure**

Chanopas, A., Krairit, D. & Khang, D. (2006). Managing information technology infrastructure: a new flexibility framework. *Management Research News*, 29(10), 632-651.

Fink, L. & Neumann, S. (2009). Exploring the perceived business value of the flexibility enabled by information technology infrastructure. *Information & Management*, 46(2), 90.

Greengard, S. & Kshetri, N. (2010). Cloud Computing and Developing Nations. *Association for Computing Machinery. Communications of the ACM*, 53(5), 18.

### **5. Strategic alignment**

Bergeron, F., Raymond, L. & Rivard, S. (2004). "Ideal Patterns of Strategic Alignment and Business Performance," *Information & Management*, 41(8), 1003-1020.

Chan, Y. & Reich, B. (2007). IT alignment: what have we learned? *Journal of Information Technology*, 22(4), 297-315.

Hooper, V., Huff, S. & Thirkell, P., (2010). The Impact of IS Marketing Alignment on Marketing Performance and Business Performance, *Database*, 41(1), 36-55.

### **6. IT as a resource**

Fink, L. (2011). How do IT capabilities create strategic value? Toward greater integration of insights from reductionistic and holistic approaches. *European Journal of Information Systems*, 20(1), 16-33.

Rivard, S., Raymond, L. & Verreault, D. (2006). Resource-based view and competitive strategy: An integrated model of the contribution of information technology to firm performance, *Journal of Strategic Information Systems*, 15(1), 29-50.

Srivastava, S. & Teo, T. (2008). The Relationship between E-Government and National Competitiveness: The Moderating Influence of Environmental Factors. *Communications of the Association for Information Systems*, 23, 5.

### **7. Dynamic capabilities**

Macher, J. & Mowery, D. (2009). Measuring Dynamic Capabilities: Practices and Performance in Semiconductor Manufacturing. *British Journal of Management*: s1, 20, S41.

Pavlou, P. & El Sawy, O. (2010). The "Third Hand": IT-Enabled Competitive Advantage in Turbulence Through Improvisational Capabilities. *Information Systems Research: Special Issue on Digital Systems and Competition*, 21(3), 443-471,656-657.

## **8. Organizational innovation**

Chesbrough, H. (2007). Business model innovation: It's not just about technology anymore, *Strategy & Leadership*, 35(6), 12-17.

Drucker, P. F. (2002). The discipline of innovation. *Harvard Business Review*, 80(8), 102.

## **9. Product/service innovation models**

Fleming, L. & Sorenson, O. (2003). Navigating the Technology Landscape of Innovation, *MIT Sloan Management Review*, 44(2), 15-23.

Algezau, S. & Filieri, R. (2010). Investigating the role of social capital in innovation: sparse versus dense network. *Journal of Knowledge Management*, 14(6), 891-909.

## **10. Software innovation**

Aen, I. (2008). Essence: facilitating software innovation. *European Journal of Information Systems: Special Issue on Design Science Research*, 17(5), 543-553.

Von Hippel, E. & Von Krogh, G. (2003). Open source software and the 'privatecollective' innovation model: Issues for organization science, *Organization science*, 14(2), 209-223.

## **11. The world of 2.0**

Andriole, S. (2010). Business Impact of Web 2.0 Technologies. *Association for Computing Machinery. Communications of the ACM*, 53(12), 67.

Anonymous. (2010). How Social Media Are Changing the Face of Business. *Leader to Leader*, (57), 59.

Leader-Chivée, L., Hamilton, B. & Cowan, E. (2008). Networking the Way to Success: Online Social Networks for Workplace and Competitive Advantage. *People and Strategy*, 31(4), 40-46.

## **Materials and Equipment**

Students are expected to download the required readings from electronic databases such as Proquest, ACM Digital Library, etc.

## **Assessment Requirements**

- 1) Assignments** (4 assignments, 10 points each); 1000 words/assignment (40%)
- Assignment 1 (Week 4) - addresses Course Learning Objectives 1, 2
  - Assignment 2 (Week 7) - addresses Course Learning Objectives 1, 3, 4
  - Assignment 3 (Week 8) - addresses Course Learning Objectives 1, 2, 3, 4
  - Assignment 4 (Week 10) - addresses Course Learning Objectives 1, 5, 6, 7

Throughout the course, topics will be discussed and articles will be provided to the students. In these individual assignments, students are expected to make a special effort to apply these

concepts to real organizations. The goal of the assignment is to show understanding of the theoretical concepts. In order to do so, the students can:

- Find a case in real life, for example, in the newspaper or on a web site, and explain the situation using the concepts introduced in class
- Take two concepts introduced in class and integrate them to create a new theoretical model and explain what types of real-life situation this model would be able to explain
- Take two concepts introduced in class and contrast them to show under which circumstances each one would be suitable to explain real-life situations

These assignments demand the production of original knowledge. Summarizing concepts covered in class is not acceptable and will be given a score of zero.

The students are strongly encouraged to validate their choice of topic for the assignment with the instructor and submit a draft for comments before the due date.

Assignments are to be submitted to both lecturers by e-mail by 8:30am on the due date.

**2) Presentation** (1 presentation, 20 points) **(20%)**  
(Weeks 4-11)

Each presentation will last 30 minutes, including a 10 minutes question period.

Students will be required to make one presentation on a topic included in the course outline. The presentations will take place throughout the trimester. Dates will be set after the first class.

Students are expected to present the following elements:

- A description of a company (chosen by the student)
- An analysis of the company's current situation
- A proposal for a course of action (strategy, innovation, etc.)
- An evaluation of the appropriateness of the course of action using the theoretical elements covered in class

The company case is expected to be documented using secondary sources (web, company website, report to investors, newspapers, etc.).

The presentation will be evaluated both for form and content. Each component will be evaluated on 10 points.

Content evaluation will be based on:

- Quality of the analysis (has the student understood the company, its environment, and the general forces in play)
- Quality of the proposed course of action (appropriateness considering the situation)
- Clear demonstration that the theoretical elements were understood and applied correctly

Form evaluation will be based on standard criteria for presentations such as:

- Timing (20 minutes sharp)
- Quality of the visual support
- Voice clarity
- Quality of language
- Engaging the audience (always looking at the audience, never at the screen)

- Physical attitude (avoiding crossing arms, putting hands in pocket, etc.)
- Structure of the presentation (announcing content, wrapping up sections adequately)

**3) Final test (40 points) (40%)**  
(Week 12)

The final test will consist of the application of theories and concepts covered in the course. Further details will be provided nearer the time.

*Note: 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 FCA programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.*

**Examinations**

There will be no examination for this course.

**Penalties**

For work submitted after a deadline, students will be awarded 0% for that assignment.

**Mandatory Course Requirements**

Students are expected to obtain a minimum weighted average of 50% for the assignments and presentation.

Students are expected to attend all classes and to submit all assignments as well as sit the test.

In the case of absence due to illness, a medical certificate should be submitted to the Course Coordinator, immediately after return to university. Absence or non-submission of assignments for other reasons should be discussed with the Course Coordinator, preferably in advance.

Failure to meet mandatory requirements does not prevent a student from completing other pieces of assessment.

**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 of Additional Information**

Additional information, or information on changes, will be announced in class or conveyed to students via Blackboard, email, phone, or through the class representative.

**Use of Turnitin (if applicable)**

Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine <http://www.turnitin.com>. Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and subject to checking by Turnitin. Turnitin will retain a copy of submitted materials on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

**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](http://www.victoria.ac.nz/home/study).

Find out about academic progress and restricted enrolment at

[www.victoria.ac.nz/home/study/academic-progress](http://www.victoria.ac.nz/home/study/academic-progress).

The University's statutes and policies are available at [www.victoria.ac.nz/home/about/policy](http://www.victoria.ac.nz/home/about/policy), except qualification statutes, which are available via the Calendar webpage at

[www.victoria.ac.nz/home/study/calendar](http://www.victoria.ac.nz/home/study/calendar) (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](http://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](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/)