TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI
VICTORIA
UNIVERSITY OF WELLINGTON

School of Information Management

MMIM 582
SPECIAL TOPIC: ENTERPRISE SYSTEMS & SUPPLY CHAIN MANAGEMENT

Trimester Three 2011

COURSE OUTLINE

Names and Contact Details

Course Coordinator	Jean-Grégoire Bernard
Room	Room 409, Rutherford House, Pipitea Campus
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Trimester Dates

Teaching Period: Thursday 10th November – Friday 17th February 2012
Examination Period: Monday 20th February – Saturday 25th February 2012

Class Times and Room Numbers
Thursday 17:40 – 19:30 in Railway West Wing (RWW) 129

Course Content
Firms increasingly rely upon the marketplace to fulfil their information systems needs, requiring novel skills on behalf of managers to evaluate and to deal with vendors. This is a seminar-style course for those interested in working for an organization implementing enterprise systems: a broad class of configurable systems (ERP, CRM, SCM, BI) that are bought rather than custom-made by adopters, and that are developed and sold by vendors.

This course explores both the vendor and the customer sides of the divided software life cycle of enterprise systems. On the vendor side, the course examines the strategies employed by vendors

to develop, market, and sell enterprise systems. On the customer side, the course examines the theory and practice of enterprise systems project chartering, of implementing and configuring enterprise systems, and of developing an analytical capability from enterprise systems. The adoption of enterprise systems is usually done in the context of a larger organizational improvement and change initiative. When enterprise systems are designed to digitize inter-organizational and supply chain business processes, the complexity of adoption is magnified. The adoption of enterprise systems is thus a venture fraught not only with significant potential rewards but also considerable risks. This course will provide students with the skills and knowledge required to face the challenges related to the adoption, implementation and the derivation of value from enterprise systems.

Course Learning Objectives

By the end of the course, students should be able to (week # in parenthesis):

1. Describe and understand the dynamics and current trends of the markets for enterprise systems. (1)
2. Describe and understand the business models, product development practices, and marketing practices of enterprise systems vendors. (2, 3, 4, 5)
3. Evaluate and analyse the rationale for enterprise systems as an enabler of organizational and strategic change initiatives. (5, 6, 7)
4. Evaluate and analyse the technical and organizational challenges of implementing and maintaining enterprise systems. (8)
5. Understand and appreciate the practices required to capture the organizational benefits of enterprise systems. (9, 10, 11)

The course objectives include the Faculty learning objectives which are the development of critical and creative thinking, leadership, effective oral and written academic communication, and a global and multicultural perspective. Selected Faculty learning objectives will be assessed along with the following specific outcomes based on the statutory statement of course learning objectives above.

Course Schedule and Readings

Please note that slight variations might be made to this schedule as the trimester progress. Changes will be communicated in class if necessary. There is no textbook for this course. I expect you to read the required readings before each class and to have done the informal exercises if any were assigned for the class. Extra readings to be discussed in class may be assigned and communicated in class during the trimester. All course readings will be made available via the 'Blackboard' system. Videos and podcasts will also be provided on 'Blackboard' when relevant.

Class	*Topic*	*Required readings and preparation*
Week 1 Nov 10	Introduction – Enterprise systems and the market-based perspective on IS development	*Required* – Sawyer, S. (2001). A market-based perspective on information systems development. *Communications of the ACM, 44*(11), 97-102. – Markus, M. L., & Tanis, C. (2000). The enterprise systems experience-from adoption to success. In R. W. Zmud (Ed.), *Framing the domains of it research: Glimpsing the future through the past* (pp. 173-207). Cincinnati, OH: Pinnaflex Educational Resources, Inc. *Optional* – Wailgum, T. (2008). Why ERP systems are more important than ever. *CIO Magazine*. http://www.cio.com/article/print/177300 – Wailgum, T. (2010). Throwing enterprise software vendors under the bus. *CIO Magazine*. http://goo.gl/wlFgN – Hofmann, P. (2008). ERP is dead, long live ERP. *IEEE Internet Computing, 12*(4), 84-88. – Andreessen, M. (2011). Why software is eating the world. *Wall Street Journal*. http://goo.gl/yC2MQ – Jacobs, F.R., Weston, F.C. (2007). Enterprise Resource Planning (ERP) – A brief history. *Journal of Operations Management, 25*, 357-363.
Week 2 Nov 17	Enterprise systems as products (part 1): – Strategy in the enterprise software business	*Required* – Shapiro, C., Varian, H.R. (1999). The art of standard wars. *California Management Review, 41*(2), 8-32. – Cusumano, M. (2008). The changing software business: Moving from products to services. *IEEE Software, 41*(1), 20-27. – Cusumano, M. (2003). Beware the lure of the horizontal. *Communications of the ACM, 46*(7), 15-17. – Cusumano, M. (2007). The changing labyrinth of software pricing. *Communications of the ACM, 50*(7), 19-22. *Optional* – Christensen, C.M., Johnson, M.W. (2009). *What are business models, and how are they built?* Harvard Business School Module Note 9-610-019. – Gupta, S., Lehmann, D.R. (2003). Customers as assets. *Journal of Interactive Marketing, 17*(1), 9-24. – Nambisan, S. (2001). Why service businesses are not product businesses. *Sloan Management Review,*

		42(4), 72-80. – Fink, L., Markovitch, S. (2008). Generic verticalization strategies in enterprise system markets: An exploratory framework. *Journal of Information Technology, 23,* 281-296.
Week 3 Nov 24	Enterprise systems as products (part 2): – The development life cycle of an enterprise system	*Required* – Case study (to be distributed in class on week 2 or before). – Scott, J.E., Kaindl, L. (2000). Enhancing functionality in an enterprise software package. *Information & Management, 37*, 111-122. – von Hippel, E., Katz, R. (2002). Shifting Innovation to Users via Toolkits. *Management Science, 48*(7), 821-833. *Optional* – von Hippel, E. (1986). Lead users: A source of novel product concepts. *Management Science, 32*(7), 791-805. – Brown, S.L., Eisenhardt, K.M. (1995). Product development: Past research, present findings, and future directions. *Academy of Management Review, 20*(2), 343-378. – Phaal, R., Farrukh, C.J.P., Probert, D.R. (2004). Technology roadmapping – A planning framework for evolution and revolution. *Technological Forecasting & Social Change, 71,* 5-26. – Fink, L., Markovitch, S. (2008). Generic verticalization strategies in enterprise system markets: An exploratory framework. *Journal of Information Technology, 23,* 281-296.

Week 4 Dec 1 ***16:30* (tbc)**	Enterprise systems as products (part 3): – Platform strategy and open innovation	*Required* – Farhoomand, A. (2007). Opening up of the software industry: The case of SAP. *Communications of the Association for Information Systems, 20,* 800-811. – West, J., Gallagher, S. (2006). Challenges of open innovation: The paradox of firm investment in open-source software. *R&D Management, 36*(3), 319-331. – Boudreau, K.J. (Forthcoming). Let a Thousand Flowers Bloom? An Early Look at Large Numbers of Software App Developers and Patterns of Innovation. *Organization Science*. *Optional* – Popp, K.M. (2010). Goals of software vendors for partner ecosystems – a practitioner's view. *ICSOB 2010*. Springer-Verlag: Berlin, Germany. – Gawer, A. Henderson, R. (2007). Platform Owner Entry and Innovation in Complementary Markets: Evidence from Intel. *Journal of Economics & Management Strategy, 16*(1), 1-34. – Chellappa, R., Saraf, N. (2010). Alliances, rivalry, and firm performance in enterprise systems software markets: A social network approach. *Information Systems Research, 21*(4), 849-871.
Week 5 Dec 15	Enterprise systems as products (part 4): – Diffusion & sales cycle	*Required* – Wybo, M. (2007). The IT sales cycle as a source of context in IS implementation theory. *Information & Management, 44*, 397-407. – Wang, P. (2010). Chasing the hottest IT: Effects of information technology fashion on organizations. *MIS Quarterly, 34*(1), 63-85. – Furneaux, B., Wade, M. (2011). An exploration of organizational level information systems discontinuance intentions. *MIS Quarterly, 35*(3), 573-598. – Swanson, E. B. (2010). Consultancies and capabilities in innovating with IT. *Journal of Strategic Information* Systems, *19*(1), 17-27. *Optional - Sales & Diffusion* – Chandrasekaran, D., Tellis, G.J. (2011). Getting a grip on the saddle: Chasms or cycles? *Journal of Marketing, 75*, 21-34. – Wang, P., Ramiller, N.C. (2009). Community learning in information technology innovation. *MIS Quarterly, 33*(4), 709-734. – Wang, P., Swanson, E.B. (2008). Customer relationship management as advertised: Exploiting and sustaining technological momentum. *Information Technology and People, 21*(4), 323-349.

		– Skok, D. (2010). How sales complexity impacts your startup's viability. *For Entrepreneurs Blog*. http://www.forentrepreneurs.com/sales-complexity/ – Jadhav, A., Sonar, R.M. (2009). Evaluating and selecting software packages: A review. *Information and Software Technology*, *51*, 555-563. *Optional - Industry analysts* – Violino, B. (1999). The knowledge merchants. *InformationWeek*, 761, 46-76. – Firth, D.R., Swanson, E.B. (2005). How useful are IT research and analysis services? *Business Horizons*, *48*, 151-159. – Pollock, N., Williams, R. (2009). The sociology of a market analysis tool: How industry analysts sort vendors and organize markets. *Information and Organization, 19*, 129-151. – Pollock, N., Williams, R. (2011). Who decides the shape of product markets? The knowledge institutions that name and categorise new technologies. *Information and Organization, 21*, 194-217.
Week 6 Jan 12	Enterprise systems & strategy – The business value of enterprise systems	*Required* – Seddon, P.B. (2010). A multi-project model of key factors affecting organizational benefits from enterprise systems. *MIS Quarterly*, *34*(2), 305-328. – Hendricks, K.B., Singhal, V.R., Stratman, J.K. (2007). The impact of enterprise systems on corporate performance: A study of ERP, SCM and CRM system implementations. *Journal of Operations Management, 25*, 65-82. – Markus, M. L., & Tanis, C. (2000). The enterprise systems experience-from adoption to success – *from week 1, revisited*. *Optional* – Mooney, J.G., Gurbaxani, V., Kraemer, K.L. (1996). A process oriented framework for assessing the business value of information technology. *The Data Base for Advances in Information Systems, 27*(2), 68-81. – Cotteleer, M.J. (2006). Order lead-time improvement following enterprise information technology implementation: An empirical study. *MIS Quarterly*, *30*(3), 643-660. – Ranganathan, C., Brown, C.V. (2006). ERP investments and the market value of firms: Toward an understanding of influential ERP project variables. *Information Systems Research, 17*(2), 145-161.

Week 7 Jan 19	Enterprise systems & strategy – The alignment of enterprise systems with business strategy	*Required* – Wybo, M., Bernier, C. (2008). IT Governance at Oxford Industries: Information Architecture for Financial Data. *International Journal of Case Studies in Management, 6*(1), 1-14. – Ross, J.W., Weill, P., Robertson, D.C. (2006). *Enterprise Architecture as Strategy* (chapters 2 & 3). *Optional* – Gattiker, T.F., Goodhue, D.L. (2005). What Happens After ERP Implementation: Understanding the Impact of Interdependence and Differentiation on Plant-Level Outcomes. *MIS Quarterly, 29*(3), 559-585. – Smith, H.A., McKeen, J.D. (2008). Developments in practice XXX: Master data management – salvation or snake oil? *Communications of the Association for Information Systems, 23*(4), 63-72. – McKeen, J.D., Smith, H.A. (2010). Developments in practice XXXIV: Application portfolio management. *Communications of the Association for Information Systems, 26*(9), 157-170.
Week 8 Jan 26	The implementation of enterprise systems – Software tailoring and configuration – Change management – Training – Rollout	*Required* – Brown, C.V., Vessey, I. (2000). *Nibco's Big Bang*. Proceedings of the International Conference on Information Systems (ICIS 2000). pp.1-29. – Brehm, L., Heinzl, A., & Markus, M. L. (2001). *Tailoring ERP systems: A spectrum of choices and their implications*. Proceedings of the 34th Hawaii International Conference on Systems Sciences (HICSS 2001). pp.1-9. – Haines, M.N., Goodhue, D.L., Gattiker, T.F. (2006). Fit Between Strategy and IS Specialization: A Framework for Effective Choice and Customization of Information System Application Modules. *Information Resources Management Journal, 19*(3), 34-47. *Optional* – Bancroft, N., Sprengel, A., Seip, H. (1997). Configuring SAP R/3. in *Implementing SAP R/3*. Prentice Hall: Newark, NJ. – Pozzebon, M., Pinsonneault, A. (2005). Global-local negotiations for implementing configurable packages: The power of initial organizational decisions. *Journal of Strategic Information Systems, 14*, 121-145. – Soh, C., Sia, S.K. (2005). The challenges of implementing 'Vanilla' versions of enterprise systems. *MIS Quarterly Executive, 4*(3), 373-384. – Bendoly, E., Cotteleer, M.J. (2008). Understanding behavioural sources of process variation following

		enterprise system deployment. *Journal of Operations Management, 26*, 23-44. – Mathrani, S., Viehland, D., Rashid, M.A. (2007). Enterprise systems implementations in New Zealand: A practitioners' perspective. *PACIS 2007 Proceedings*. – Markus, M. L., & Tanis, C. (2000). – *from week 1*.
Week 9 Feb 2	The application of enterprise systems to supply chain management (part 1) – Supply chain simulation	*Required* – Davenport, T.H. (2004). Enterprise systems and the supply chain. *Journal of Enterprise Information Management, 17*(1), 8-19.
Week 10 Feb 9	The application of enterprise systems to supply chain management (part 2) – Inter-organizational enterprise systems – Integration with RFID technology	*Required* – Lee, H.L., Padmanabhan, V., Whang, S. (1997). The bullwhip effect in supply chains. *MIT Sloan Management Review, 38*(3), 93-102. – Dedrick, J., Kraemer, K.L., Linden, G. (2009). Who profits from innovation in global value chains? A study of the iPod and notebook PCs. *Industrial and Corporate Change, 19*(1), 81-116. – Thiesse, F., Al-Kassab, J., Fleisch, E. (2009). Understanding the value of integrated RFID systems: A case study from apparel retail. *European Journal of Information Systems, 18*(6), 592-614. *Optional* – Asif, Z., Mandviwalla, M. (2005). Integrating the supply chain with RFID: A technical and business analysis. *Communications of the AIS, 15*(24), 1-57. – Henschen, D. (2009). A matter of survival. *InformationWeek*.

Week 11 Feb 16	Developing an analytical capability from an ES – Reporting – Data warehousing – Business intelligence	*Required* – Davenport, T.H., Harris, J.G. (2007). The architecture of business intelligence. In *Competing on analytics: The new science of winning* (pp.153-173). Harvard Business School Press. – Goodhue, D.L., Wixom, B.H., Watson, H.J. (2002). Realizing business benefits through CRM: Hitting the right target in the right way. *MIS Quarterly Executive, 1*(2), 79-94. *Optional* – Bashein, B.J., Markus, M.L. (2000). Lessons learned and recommendations. In *Data warehouses: More than just mining* (pp. 107-139). Financial Executive Research Foundation. – Chaudhuri, S., Dayal, U., Narasayya, V. (2011). An overview of business intelligence technology. *Communications of the ACM, 54*(8), 88-98.

Course Delivery
A series of seminars will act as the foundation for the course. In an attempt to provide a more interactive learning environment, you will be frequently involved in class exercises, discussions, and presentations. These class exercises and presentations will not contribute to course grades (except when specified otherwise). These activities will foster deeper involvement and understanding of the themes and concepts addressed in the lectures.

Expected Workload
This is a 15 point course. One point should equate to 10 hours of work, which means a total of 150 hours for a 15-point course. You are expected to attend all course sessions, read assigned materials, and contribute to discussions. You are expected to spend 2 hours in class and about 6 hours preparing for class on average. Additional time will be required for completion of the course assignments.

Group Work
All group work will occur in class and will not contribute to the course grade.

Materials and Equipment
You will make extensive use of the University Library print and electronic resources to elaborate your vendor report and case study analysis. As a starting point, among the relevant resources we find:

- SEC Edgar
- Proquest
- LexisNexis
- Factiva
- Business Source Complete
- RDS Business Suite
- Index New Zealand
- NewztextPlus
- Analysts web sites: Gartner, Forrester, Ovum, IDC.
- On the internet: CIO Magazine, ComputerWorld NZ, InformationWeek, Baseline, Google Finance, Techcrunch, Wall Street Journal, NY Times, and enterprise systems vendors' websites are good starters, but there are many others.

Assessment Requirements		**Due date**
Short essays (3x 15%)	45%	Dec 15, Jan 26, Feb 16 – beginning of class.
Case study analyses (2x 27.5%)	55%	January 9 & February 24th, by email before 3pm
Total	100%	

3 Short essays (15% each)
This assignment requires you to write 3 short essays (approximately 1-2 pages each, single-spaced) that provide an opportunity to explore weekly topics in the readings or seminars in more depth. The goal is to go beyond the discussion or analysis in the readings and bring in a more personal point of view, such as reflecting on contemporary events reported in the media, your personal work experience or additional personal knowledge, including what you have learned in other classes. Do not simply summarize facts or arguments in the readings, but rather appropriate and elaborate on the frameworks and arguments in the readings. The idea is to react to the facts or arguments and add something new to the discussion. Essays will not be accepted after class if they deal with the case or readings discussed on that day. A detailed marking rubric will be provided on week 2.

- Topics for essay #1: Strategy for software companies, the development life cycle of an enterprise system, platform strategy and open innovation, or diffusion & sales cycle. Due no later than at the beginning of class on December 15.
- Topics for essay #2: The business value of enterprise systems, the alignment of enterprise systems with business strategy, and the implementation of enterprise systems. Due no later than at the beginning of class on January 26.
- Topics for essay #3: Supply chain management or developing an analytical capability from an ES. Due no later than at the beginning of class on February 16.

2 Case study analyses
For these case studies, you assume the role of an expert consultant on enterprise systems. The analysis should identify the key issues and challenges faced by managers of an organization. The written report of the case analysis should be of no more than 3000 words, but no less than 2000 words (excluding figures and tables). Specific questions will guide your analysis of the cases. Further instructions on how to elaborate the case study analysis as well as a detailed marking grid will be communicated in class on November 24th for the first case study and on January 26th for the second case study. Electronic copies of the case analyses are due on January 9 and February 24th before 3pm, by email.

Mandatory Course Requirements
An attendance register will be kept, however there will be no penalty for non-attendance. To pass the course, you must gain a weighted average of 50% across all assessments.

Grading Standards

Letter Grade	Number grade	Approx Dist'n *	Simple Description	More Complete Description**
A+	Over 84	4%	Outstanding	Far exceeds requirements, flawless, creative
A	80-84	10%	Excellent	Polished, original, demonstrating mastery
A-	75-79	14%	Very Good	Some originality, exceeds all requirements
B+	70-74	22%	Good	Exceeds requirements in some respects
B	65-69	26%	Satisfactory	Fulfils requirements in general
B-	60-64	18%	Acceptable	Only minor flaws. Unoriginal
C+	55-59	4%	Pass	Mistakes, recapitulation of course material
C	50-54	2%	Minimum pass	Serious mistakes or deficiencies
D	40-49	1%	Unacceptable	Little understanding, poor performance
E	00-39	1%	Fail	Below the minimum required

* This is the hypothetical percentage of students that would attain the various levels of performance, over several repetitions of the course, under similar conditions. It is recognised that the distribution in a particular course, particularly with small enrolment, may differ markedly from the long-term distribution. To obtain a fair distribution of marks relative to assignment difficulty, scaling of marks may be employed on some or all assessments.

** The lecturer will develop a more complete or specific description of the meaning of the various levels of performance based upon the specific nature of the assessment in a course. For example, performance may be determined by the qualities of a written report, a classroom presentation, or an examination. The words used to describe these kinds of assessments will obviously vary.

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.

Penalties
Assignments submitted after the due date and time will not be accepted and students will not receive any marks. Unusual or unforeseeable circumstances (e.g. serious illness, family bereavement) may lead to a waiver of this penalty but need to be discussed with the Course Coordinator as soon as possible. If a word limit is imposed, the examiner will only mark the assignment up to the word limit.

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 of Additional Information
Additional information or changes will be conveyed by means of in-class announcements and e-mail. Please ensure that you check these communication channels regularly.

Use of Turnitin
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.

Withdrawal from Courses:
Your fees will be refunded if you withdraw from this course on or before **18 November 2011**

The last date for withdrawal from this course is the three-quarter point of the teaching period, i.e. **13 January 2012.** 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.

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 and Administration Offices
http://www.victoria.ac.nz/fca/studenthelp/

Te Pūtahi Atawhai
Maori and Pacific Mentoring Programme
http://www.victoria.ac.nz/st_services/tpa/index.aspx