City University of Hong Kong

Information on a Course
offered by Department of Information Systems
with effect from Semester B in 2012 / 2013

Part I

Course Title: Theory Building for Information Systems and Theory-Inspired Design

Course Code: IS8007

Course Duration: One Semester

Credit Units: 3

Level: R8

Medium of Instruction: English

Prerequisites: Must be a registered PhD student in College of Business. For non-IS PhD student, he/she should receive individual supervisor's written permission before enrolment

Precursors: Nil

Equivalent Course: Nil

Exclusive Courses: Nil

Part II

1. Course Aims

This course aims to equip IS research students with the necessary foundations and skills on theory building for Information Systems and approaches, methodologies and steps in theory-inspired design.

Specifically, this course aims to teach Ph.D. students:

1. How to follow a rigorous, systematic approach to creating and apply theory in major forms of information systems research, including theory-inspired design science.

2. How to find opportunities for the highest levels of contributions to top management and information systems journals that value highly original theoretical contributions and theory-inspired design science—such as *Academy of Management Review*, *MIS Quarterly, Journal of Applied Psychology, Information Systems Research, Journal of MIS, Organization Science,* and *Journal of Consumer Research.*

3. How to model, write, and explain theoretical contributions and theory-inspired designs.

4. How to better review and critique articles for theoretical contributions and theory-inspired designs.

5. To create the foundation for a project good enough to be submitted to and accepted at the highest levels of theory-building workshops (to be fast-tracked to top journals) - namely the *Academy of Management Review Theory-Building Workshop at the Annual Academy of Management Meeting* or the *Journal of the Association for Information Systems Theory-Building Workshop at the Annual International Conference of Information Systems.*

2. Course Intended Learning Outcomes (CILOs)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weight
1.	Understand the challenges and strategies to develop a theoretical contribution and theory-inspired design, and to achieve rigor and relevance.	2
2.	Formulate a research problem theoretically, specify research objectives/questions, and motivate their importance.	3
3.	Applying theory and theory-inspired design in information systems research.	3
4.	Understand the role that contextual and conceptual assumptions play in theory development, especially cross-context theorizing.	2
5.	Differentiate process and variance models, specify their key elements, and achieve correspondence between theoretical arguments and model specification.	2
6.	Conceptualize multidimensional constructs and develop multi-level models.	2
7.	Critique research proposals, manuscripts, and designs from a theoretical perspective.	3

(3: Relatively most focused ILOs; 2: moderately focused ILOs; 1: less focused ILOs)

3. Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

      Seminar: 3 hours per week

TLA1: Seminar

Concepts and general knowledge of theory building are explained and discussed.

- *In-class seminar:* Dr. Lowry will provide lecture on the advanced aspects of theory building with which Ph.D. students generally lack knowledge. While lecture will be occasionally used, most of the course will follow a Ph.D.-seminar format where students are required to actively prepare and participate in discussing the materials.

- *In-class discussion*: Students participate in discussions in seminars (e.g. face-to-face discussion, and using mobile devices) and the lecturer provides feedback based on students' response.

- *In-class presentations*: Each student will be provided with the opportunity to present one or two of the basic readings during the semester and to lead the seminar on a discussion of the readings.

TLA2: Outside Seminar Activities

Outside of the regularly scheduled seminar, students will be expected to engage rigorously in several activities outside the seminar:

- *Online discussion:* Students will be giving periodic assignments to continue seminar discussions about various topics online, and will be graded on the quality of their contributions to these discussions.

- *Group work*: For higher-quality theory-building proposals and to teach collaborative research, students will be organized into groups (based on mutual interests). Students will be expected to spend substantial time meeting face-to-face and online with their groups in working toward their proposal. Students will be partially graded on their personal contribution to the group's efforts during the semester.

- *Online quizzes:* To help encourage reading and learning the materials, occasional online quizzes will be assigned to students to take individually outside of seminar time.

- *Theoretical review:* Students will each have the opportunity to write a formal theoretical critique of a paper as a take-home portion of the final exam.

ILO No	TLA1: Seminar	TLA3: Outside Classroom Activities	Hours/week (if applicable)
CILO 1	2	1	*
CILO 2	1	2	*
CILO 3	1	2	*

CILO 4	2	2	*
CILO 5	2	1	*
CILO 6	2	1	*
CILO 7	1	2	*

(1: Minor focus on the ILO; 2: Main focus on the ILO)

* This seminar is intended to be very rigorous and demanding at the highest student Ph.D. level; thus, the amount of hours required by each student per week will vary greatly based on their talent and preparation. It is expected that the amount of time outside of the seminar required will average at least 12 hours per week.

4. Assessment Tasks/Activities
(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

AT1: Participation (10%)

10% is given for student's participation in terms of quality of questions, quality of preparation of assigned readings, quality of answers, and degree of engagement and positive attitude throughout the seminar. Students are expected to act like engaged researchers and scientists, not as "typical" students.

AT2: Research proposal (60%)

The semester project involves writing a group-based research proposal involving highly original theory building for traditional IS research or a theory-inspired design for design-science research. This proposal will be submitted in four sages. Students will be provided feedback on the deliverable at each stage (which also includes revisions to the previous stage's deliverable and a response document – a summary of major changes that were made and point-by-point responses to issues that were raised). At the end of the semester, students will submit the research proposal as the deliverable for the course. Only the final proposal is graded.

Stages	Deliverable
Stage 1 • Problem Statement • Form of Engaged Scholarship • Candidate Journals	Describe the research problem, enumerate why the problem is important from both a practical and scholarly standpoint, and specify the research objectives/questions (1-3 pages). Identify the engaged Scholarship approach that will be used and explain the reasons for the choice (0.5 page). Identify candidate scholarly journals that are likely to be suitable targets for the research and explain why these can be suitable outlets (0.5 page). *Articles from these journals should serve as exemplars for the approach taken to develop the proposal.*
Stage 2 • Literature Review	Synthesize the 20-30 major articles (of the highest quality) that are relevant to the research problem and questions, clearly articulating what is known and what are the gaps in knowledge that motivate the research (3-5 pages).

Stage 3 • Role of theory • Type of model or design	Specify the role of existing theory for the research. What theory (theories) will be used to inform the study? Why? (2-4 pages). **Option A.** For behavioural IS research, specify if a process or variance approach will be used for the study and why (0.5 page). **Option B.** For theory-inspired design science, explain why the selected theory can inform design (0.5 page).
Stage 4 • Elements of model or theory-inspired design	**Option A.** For behavioural IS research, develop the key elements of the process or variance model. Ensure that there is correspondence between the theoretical arguments and the specification of the model (4-6 pages). **Option B.** For theory-inspired design science, map the key constructs to the key elements of design. Explain and argue how your unique design solutions not only fulfil the basics of the theory but contribute as a unique design solution (4-6 pages).
FINAL PAPER **Due: Last day of class**	Develop the final version of the proposal that will be assigned a grade (the other stages are designed to provide you feedback but will not be graded).

AT3: Homework and Reading Quizzes (10%)

To ensure reinforcement of reading, lecture, and discussions, various homework assignments and in-class and out-of class quizzes will be used throughout the semester. These are designed to gauge the students' grasp on theory-building concepts and knowledge.

AT4: Final Examination (20%, two parts: one 2-hour in-class exam and one take-home portion)

The examination is designed to gauge the student's grasp on theory-building concepts, including the ability to apply them in reviewing theory-based journal articles and to applying the concepts to resolve various theory-based issues. The two-hour in-class examination with focus on concepts and basic application. The take-home portion of the exam will involve students conducting a formal review of a theory-based article.

ILO No	AT1: Participation (10%)	AT2: Research proposal (60%)	AT3: Homework and Reading Quizzes (10%)	AT4: Final Examination (20%)	Remarks
CILO 1	1	2	2	1	1: Minor focus on the ILO;
CILO 2	1	2	1	1	
CILO 3	1	2	1	1	
CILO 4	1	1	1	2	2: Main focus on the ILO)
CILO 5	1	1	1	2	

CILO 6	1	2	1	2	**
CILO 7	1	1	1	2	

** Students are required to pass EACH of the following three major elements of the course in order to secure a pass for the course: (1) participation, homework, and quizzes; (2) research proposal; (3) and the final examination. Failure of any of these results in failure for the entire course.

5. Grading of Student Achievement:

Grading is assigned based on students' achievement of ILOs in accordance to the defined grading criteria. Grading pattern: Standard (A+, A, A- .. C-, D, F). There is NO minimum level of grade guaranteed to any enrolled student. Thus, a Ph.D. student could earn an F, D, or C- in this course, with poor performance.

Part III

Keyword Syllabus:

- How to make a theoretical contribution within IS research
- How to formulate a research problem from a theoretical perspective, including specifying research objectives/questions, and motivating their importance.
- Importance of assumptions and context in theory
- Theory-inspired design science
- Process versus variance models
- Multidimensional constructs and multi-level models
- Theoretical critiques

Required Textbooks and Journal Articles

- Van De Ven, A. H., Engaged Scholarship: A Guide for Organizational and Social Research, Oxford University Press, 2007.
- Huff, Anne S., Writing for Scholarly Publications, Sage Publications, 1999.
- Scholarly journal articles as listed in the syllabus and as announced in class

Bibliography of Articles Covered During the Semester

Ahuja, G., Lampert, C. M., & Tandon, V. 2008. Chapter 1: Moving Beyond Schumpeter: Management Research on the Determinants of Technological Innovation. Academy of Management Annals, 2(1): 1-98.

Alavi, M., & Leidner, D. E. 2001. Review: Knowledge Management And Knowledge Management Systems: Conceptual Foundations And Research Issues. MIS Quarterly, 25(1): 107-136.Alvesson, M., & Karreman, D. A. N. 2007. Constructing Mystery: Empirical Matters In Theory Development. Academy of Management Review, 32(4): 1265-1281.

Ancona, D. G., Goodman, P. S., Lawrence, B. S., & Tushman, M. L. 2001. Time: A New Research Lens. Academy of Management Review, 26(4): 645-563.

Bacharach, S. B. 1989. Organizational Theories: Some Criteria for Evaluation. Academy of Management Review, 14(4): 496-515.

Barley, S. R. 2006. When I Write My Masterpiece: Thoughts On What Makes A Paper Interesting. Academy of Management Journal, 49(1): 16-20.

Bem, D. J. 1995. Writing a review article for Psychological Bulletin. Psychological Bulletin, 118(2): 172-177.

Benbasat, I., & Zmud, R. W. 1999. Empirical Research In Information Systems: The Practice Of Relevance. MIS Quarterly, 23(1): 3-16.

Bergh, D. D. 2003. From the Editors Thinking Strategically about Contribution. Academy of Management Journal, 46(2): 135-136.

Bluedorn, A. C. and R. B. Denhardt (1988). "Time and Organizations." Journal of Management 14(2): 299-320.

Burton-Jones, A., & Gallivan, M. J. 2007. Toward A Deeper Understanding Of System Usage In Organizations: A Multilevel Perspective. MIS Quarterly, 31(4): 657-679.

Cascio, W. F., & Aguinis, H. 2008. Chapter 3: Staffing Twenty-first-century Organizations. Academy of Management Annals, 2(1): 133-165.

Chan, D. 1998. Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. Journal of Applied Psychology, 83(2): 234-246.

Churchill Jr, G., Garda, R., Hunt, S., & Webster Jr, F. 1988. Comments on the AMA Task Force study. The Journal of Marketing: 26-51.

DiMaggio, P. J. 1995. Comments on "What Theory is Not", Administrative Science Quarterly, 40 ed.: 391-397.

Edmondson, A. C. and S. E. McManus. 2007. Methodological Fit in Management Field Research. Academy of Management Review 32(4): 1155-1179.

Edwards, J. R. 2001. Multidimensional Constructs in Organizational Behavior Research: An Integrative Analytical Framework. Organizational Research Methods 4(2): 144-192.

Feldman, D. C. 2004a. Being A Developmental Reviewer: Easier Said Than Done, Journal of Management, 30 ed.: 161. 9

Feldman, D. C. 2004b. The Devil is in the Details: Converting Good Research into Publishable Articles. Journal of Management: 1.

Feldman, D. C. 2004c. What are We Talking About When We Talk About Theory?, Journal of Management, 30 ed.: 565-567.

Force, A. T. 1988. Developing, Disseminating, and Utilizing Marketing Knowledge. Journal of Marketing, 52(4): 1-25.

Gregor, S. 2006. The Nature Of Theory In Information Systems. MIS Quarterly, 30(3): 611-642.

Hsieh, J. J. P.-A., Rai, A., & Keil, M. 2008. Understanding Digital Inequality: Comparing Continued Use Behavioral Models Of The Socio-Economically Advantaged And Disadvantaged. MIS Quarterly, 32(1): 97-126.

Jarvis, C. B., Mackenzie, S. B., Podsakoff, P. M., Mick, D. G., & Bearden, W. O. 2003. A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research. Journal of Consumer Research, 30(2): 199-218.

Johns, G. 2006. The Essential Impact Of Context On Organizational Behavior. Academy of Management Review, 31(2): 386-408.

Klein, K. J., Dansereau, F., & Hall, R. I. 1994. Levels Issues In Theory Development, Data Collection, And Analysis. Academy of Management Review, 19(2): 195-229.

Klein, K. J., Tosi, H., & Cannella Jr, A. A. 1999. Multilevel Theory Building: Benefits, Barriers, And New Developments. Academy of Management Review, 24(2): 248-248.

Klein, R., & Rai, A. 2009. Interfirm Strategic Information Flows In Logistics Supply Chain Relationships. MIS Quarterly, 33(2009).

Langley, A. 1999. Strategies For Theorizing From Process Data. Academy of Management Review, 24(4): 691-710.

Law, K. S., Chi-Sum, W., & Mobley, W. M. 1998. Toward A Taxonomy Of Multidimensional Constructs. Academy of Management Review, 23(4): 741-755.

Lee, A. 1999. Strategizing for Compelling and Significant Research. MIS Quarterly, 23(2): 145-145.

Lewis, M. W., & Grimes, A. I. 1999. Metatriangulation: Building Theory From Multiple Paradigms. Academy of Management Review, 24(4): 672-690.

Locke, E. A. 2007. The Case for Inductive Theory Building. Journal of Management, 33(6): 867-890.

Maitlis, S., & Ozcelik, H. 2004. Toxic Decision Processes: A Study of Emotion and Organizational Decision Making. Organization Science, 15(4): 375-393.

Mitchell, T. R., & James, L. R. 2001. Building Better Theory: Time And The Specification Of When Things Happen. Academy of Management Review, 26(4): 530-547.

Montealegre, R. 2002. A Process Model of Capability Development: Lessons from the Electronic Commerce Strategy at Bolsa de Valores de Guayaquil. Organization Science, 13(5): 514-531.

Morgeson, F. P., & Hofmann, D. A. 1999. The Structure And Function Of Collective Constructs: Implications For Multilevel Research And Theory Development. Academy of Management Review, 24(2): 249-265.

Niazkhani, Z., Pirnejad, H., Berg, M., & Aarts, J. 2009. The Impact of Computerized Provider Order Entry Systems on Inpatient Clinical Workflow: A Literature Review. J Am Med Inform Assoc, 16(4): 539-549.

Overby, E. 2008. Process Virtualization Theory and the Impact of Information Technology. Organization Science, 19(2): 277-291.

Petter, S., Straub, D., & Rai, A. 2007. Specifying Formative Constructs In Information Systems Research. MIS Quarterly, 31(4): 623-656.

Poole, M. S., & van de Ven, A. H. 1989. Using Paradox to Build Management and Organization Theories. Academy of Management Review, 14(4): 562-578.

Rai, A., Maruping, L. M., & Venkatesh, V. 2009. Offshore Information Systems Project Success: The Role Of Social Embeddedness And Cultural Characteristics. MIS Quarterly, 33(3): 617-A617.

Romanelli, E. and M. L. Tushman. 1994. Organizational Transformation As Punctuated Equilibrium: An Empirical Test. Academy Of Management Journal 37(5): 1141-1666.

Saunders, C. 2005. From the Trenches: Thoughts on Developmental Reviewing, MIS Quarterly, 29 ed.: 193-193.

Schminke, M. 2004. Raising the Bamboo Curtain. Academy of Management Journal, 47(3): 310-314.

Shang, J., Yildirim, T. P., Tadikamalla, P., Mittal, V., & Brown, L. H. 2009. Distribution Network Redesign for Marketing Competitiveness. Journal of Marketing, 73(2): 146-163.

Shipp, A. J., J. R. Edwards, et al. (2009). Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. Organizational Behavior and Human Decision Processes 110(1): 1-22.

Simon, H. 1980. Random Thoughts About Methods of Research. Pittsburgh, Unpublished Manuscript, Carnegie Mellon University: 1-10.

Sutton, R. I., & Staw, B. M. 1995. What Theory is Not. Administrative Science Quarterly, 40(3): 371-384.

Varadarajan, P. 1996. From the editor: Reflections on research and publishing. Journal of Marketing, 60(4): 3-6.

Van de Ven, A. H. and M. S. 1995. Explaining Development and Change in Organizations. Academy of Management Review 20(3): 510-540.

Venkatraman, N. 1989. The Concept of Fit in Strategy Research: Toward Verbal and Statistical Correspondence. Academy of Management Review, 14(3): 423-444.

Venkatesh, V., L. M. Maruping, & Brown, S. 2006. Role of Time in Self-Prediction of Behavior. Organizational Behavior and Human Decision Processes 100(2): 160-176.

Weber, R. 2003. The Problem of the Problem. MIS Quarterly, 27(1): 1-1.

Weick, K. E. 1995. What Theory Is Not, Theorizing Is. Administrative Science Quarterly, 40(3): 385-390.

Whetten, D. A. 1989. What Constitutes a Theoretical Contribution? Academy of Management Review, 14(4): 490-495.

Wolfe, R. M., Sharp, L. K., & Lipsky, M. S. 2002. Content and Design Attributes of Antivaccination Web Sites. JAMA, 287(24): 3245-3248.

Zmud, B., & Ives, B. 1996. Editor's Comments. MIS Quarterly, 20(3): 257-257.