

University of Illinois at Chicago
College of Urban Planning & Public Affairs
Graduate Program in Public Administration

Fall 2005

PA 461 – Management of Information Technology in Government

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Time & Place: Thursday 6:00 – 9:00 p.m., BH 309

Introduction

Public and non-profit organizations have been and are having to address the vast array of new Information Technology (IT) – hardware and software – which has been coming on the market. It is usually asserted that this technology will either (1) significantly enhance the performance of some function or task, make the organization more efficient, help employees do their jobs better, improve control over financial and/or human resources and ensure accountability for their use; (2) provide better and more timely information for managers and policy makers so that they can make better decisions; and/or (3) provide information or services to clients or the general public that will increase their satisfaction with governmental performance while increasing organizational efficiency. These changes, it is believed, will improve relations with various stakeholders, including political officials and the public.

Too frequently, such hopes and promises are only partially realized, if they are realized at all. Typically, the implementation of the new technology takes significantly longer than anticipated and direct costs are many times initial projections. The indirect costs, most of which were unanticipated, can seem even worse to those who live through the changes. The opportunities to rethink and improve the efficiency and effectiveness of “how we do business” are unrecognized or unexamined. Stove-piped systems, processes, and data banks remain as obstacles to optimally integrated communications and operations, and thus limiting the effectiveness of new systems. The damage to the public image and credibility of the organization can be significant.

The course makes no assumptions about the student's prior experience with computer hardware, software, and telecommunications. It will present students the fundamentals of these components of information system. Participants in this course will also investigate the issues and problems that have surrounded the introduction, management, and effective use of new information technologies in organizations.

Among the questions to be addressed are:

- What are the organizational implications of introducing new technologies that changes relationships among organizational participants?
- Why has the introduction of new information systems been problematic in so many organizations and government agencies?
- What are the elements that must be addressed in the design and implementation of a new information system?
- What are the key success factors?
- How can information technology enhance the capacity of the organization to deliver high-quality service to the public?

Text Book and Additional Readings

Required Text:

Ralph Stair and George Reynolds, *Fundamentals of Information Systems*, 3rd edition, Course Technology, 2005. ISBN: 0-619-21560-7.

Additional Readings:

Some additional readings will be assigned in some class sessions. Some parts are chosen from *Technology and the Future* by Albert Teich, and *Up and Running: Integrating Information Technology and the Organization* by Richard Walton. You may find the books at half.com (<http://half.ebay.com/>) or other websites. Other articles will be available on the blackboard, or can be downloaded from the Internet.

Assignments

- **Class participation and assignments.** Students are expected to have read, understood, and reflected on the assigned reading materials **prior** to class. The reading materials are listed in each session of the course schedule. After-class assignments are also required for some sessions.
- **Case memorandum and discussion.** Students are required to write memo on two of the case studies covered in the course. They will also be responsible for presentation and leading the class discussion.
- **Term paper and presentation.** This is to be a case study of the organization in introducing and managing a new information system. The proposal of the term paper is due on October 20. The final paper is due on December 1. Students will give project presentation in the session on December 1.

Course Grade:

Your grade in the course will be determined as follows:

Class participation and assignments: **(15% of final grade)**

Case memo and discussion: (20% of final grade)
Term paper and presentation: (25% of final grade)
Midterm exam: (20% of final grade)
Final exam: (20% of final grade)

Course policies

Plagiarism: Plagiarism and cheating are taken very seriously and penalized severely. If you are caught plagiarizing an assignment or cheating on an exam, you will receive a grade of “F” for the course – no exceptions. There are further sanctions for academic dishonesty in accordance with university guidelines. Guidelines regarding academic integrity at UIC are available online at the following website: <http://www.uic.edu/depts/sja/integrit.htm>, and sanctions for academic dishonesty are also available online at <http://www.uic.edu/depts/sja/chpt3.htm#3>.

Participation by Students with Disabilities: If you need special accommodations in order to meet any of the requirements of this course, please contact me as soon as possible.

Incompletes, later assignments, and extra work: Late submission of assignments will be downgraded unless the student has a legitimate excuse or crisis causing the delay in completing work (i.e. illness, family emergency). Also I will only grant incompletes to students who have legitimate excuses or crisis and who make requests prior to the end of the course.

Course Schedule

Week 1: August 25

Topic: Introduction and Overview

Week 2: September 1

Topic: Thinking about technology: Debates, Perspectives, Dilemmas

Readings: (*write a one-page review on one of them, and bring it to class*)

Marx, “Does Improved Technology Mean Progress?” (in Teich *Technology and the Future*)

Postman, “Technopoly: The Broken Defenses” (in Teich *Technology and the Future*)

Mesthene, “The Role of Technology in Society” (in Teich *Technology and the Future*)

Sclove, “Technological Politics As If Democracy Really Mattered” (in Teich *Technology and the Future*)

Forester and Morrison, “Computer Ethics” (in Teich *Technology and the Future*)

Zuboff, “In the Age of Smart Machine” (in Teich *Technology and the Future*)

Week 3: September 8

Topic: Characteristics and Functions of Information Systems

Readings:

Stair and Reynolds, “An Introduction to Information Systems in Organizations” Ch.1

Heeks, R., “Reinventing government in the information age”, *Reinventing Government in the Information Age: International Practice in IT-enabled Public Sector Reform*, Routledge, 1999, Ch.1, pp. 9-21

Zwass, V., *Information Systems and Their Capabilities, Foundations of Information Systems*, Ch. 1, pp. 2-29 (*optional*)

Zwass, V., *Fundamental Concepts of Information Systems, Foundations of Information Systems*, Ch. 2, pp. 38-64 (*optional*)

Assignment:

Stair and Reynolds, Ch. 1, Discussion question 1, 3, 6 (pp. 39)

Week 4: September 15

Topic: Information System I – Hardware, Software and Data Management

Readings:

Stair and Reynolds, “Hardware and Software”, Ch. 2

Stair and Reynolds, “Organizing Data and Information”, Ch. 3

Assignment:

Stair and Reynolds, Ch. 2, Discussion question 1, 5, 8 (pp. 89)

Stair and Reynolds, Ch. 3, Discussion question 1, 4 (pp. 129)

Week 5: September 22

Topic: Information System II – Telecommunications and Internet

Readings:

Stair and Reynolds, “Telecommunications, the Internet, Intranets, and Extranets”, Ch. 4

Case:

Stair and Reynolds, “DBMS Upgrade Faces Employee Opposition” (pp. 132)
(*Case memo due at the beginning of class*)

Assignment:

Stair and Reynolds, Ch. 4, Discussion question 1, 6, 9 (pp. 172)

Week 6: September 29

Topic: Information System III – Transaction Processing Systems

Readings:

Stair and Reynolds, “Electronic Commerce and Transaction Processing Systems”, Ch. 5

Assignment:

Stair and Reynolds, Discussion question 2, 5, 6 (pp. 220)

Week 7: October 6

Topic: Information System IV – Decision Support Systems

Readings:

Stair and Reynolds, “Information and Decision Support Systems”, Ch. 6

Week 8: October 13

Midterm exam

Week 9: October 20

Topic: Information System Strategic Analysis: Assessing the Information Architecture Needs of a Public Organization

Readings:

Stair and Reynolds, “Systems Development” Ch. 8

Carr, N., “IT Doesn’t Matter”, *Harvard Business Review*, May 2003, pp. 41-51

Heller, Melissa Pinto, “Paperless Document Recording: Saving Time and Money in Broward County”, *Government Finance Review*, June 2002, Vol.18 Issue 3, pp. 28-32.

Case:

"Computer-Aided Police Dispatching in Houston, Texas", Kennedy School of Government, Harvard University. (*Case memo due at the beginning of class*)

The proposal of the term paper is due!

Week 10: October 27

Topic: IT and Organizations I

Readings: (*Write a two-page summary of key points*)

Walton, R., *Up and Running*, Part I (Ch. 1, Ch. 2) and Part II (Ch. 3, Ch. 4, Ch. 5)

Week 11: November 3

Topic: IT and Organizations II

Readings: (*Write a two-page summary of key points*)

Walton, R., *Up and Running*, Part III (Ch. 6, Ch. 7, Ch. 8)

Week 12: November 10

Topic: Context for Information Management and Strategy

Readings:

Fletcher, Patricia Diamond, "Strategic Planning for Information Technology Management in State Governments", *Information Technology and Computer Applications in Public Administration: Issues and Trends*, edited by G. David Garson, Idea Group, 1999, pp. 81-98.

Ward and Peppard, "The Evolving Role of Information Systems and Technology in Organization: A Strategic Perspective", *Strategic Planning for Information Systems*, Third Edition, Wiley Publishing, Chapter 1, pp. 1-63.

Case:

"Washington State Department of Licensing", *Electronic Hallway*, Evans School of Public Policy, University of Washington (*Case memo due at the beginning of class*)

Week 13: November 17

Topic: Organizing and Resourcing Information Systems

Readings:

Perlman, Ellen, "Outside the Box CIO's", *Governing*, June 2003,

Perlman, Ellen, "The Art of Doing the Deal", *Governing*, July 2003,

Chen, Yu-Che and James L. Perry, "IT Outsourcing: A Primer for Managers", IBM Endowment for the Business of Government,

Lee, Jae-Nam, Minh Q. Huynh, Ron Chi-Wai Kwok, and Shih-Ming Pi, "IT Outsourcing Evolution: Past, Present, and Future", *Communications of the ACM*, May 2003, Vol. 46, no. 5, pp. 84-89.

Week 14: November 24

Thanksgiving holiday

Happy Holiday!!

Week 15: December 1

Topic: Student Presentations

The term paper is due!

December 5 – 9: Final Exam