

# MIS 381N.1: Information Technology Management

## Spring 2007

Unique numbers: 01830 T Th 12:30 – 2:00 p.m. UTC  
123456 – T Th 3:30 – 5:00 p.m. UTC

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### Course Objectives

Information technology (IT) has the potential to change the landscape of global competition, increase productivity, change industry structure, make markets more efficient, and alter a firm's boundary and competitive position. While IT can provide competitive advantage, it has, in many cases, become a strategic necessity. It is no wonder that more than \$2 trillion is invested in IT each year on a worldwide basis, which is over 50% of all capital expenditures. Given the level of investments and the importance of IT, it is imperative that forward-thinking managers understand the process of using information and evaluating, assimilating, and managing IT within products, services and all value activities of a firm for operational efficiency, and business partner and strategic values. Managers need to be able to articulate the impact of IT products and services at the firm, industry and economy levels, so that investments are meaningful and productive.

However, the bursting of stock market bubble, decline in IT investments, increase in well-publicized bankruptcies, and the significant gap between the promise and the perceived benefits of IT have led skeptics to question the economic contribution of IT. The skepticism is not bad in itself, since it raises numerous questions involving how IT can provide cost leadership, differentiation and/or strategic benefits. The true benefits of IT can be realized only when organizations exploit certain characteristics of IT, and align business processes, incentives and partner (e.g., customers and suppliers) readiness with IT capabilities.

This course is designed to provide students frameworks and analytical tools to understand the economic and strategic implications of IT, transformation dynamics, and risks and pitfalls of IT decisions. The course will address many issues that are of interest to all managers including (a) identifying the characteristics of IT innovation and their implications on firm IT adoption; (b) understanding IT and the Internet contributions to economic growth; (c) evaluating the strategic implications of IT; (d) developing a framework for electronic business transformation; (e) exploring emerging IT-driven business practices (e.g., supply chain management, customer relationship management, and enterprise resource planning); and (c) developing frameworks for IT investment justification.

## Course Themes

**Theme I:** Firm and industry transformation enabled by IT

**Theme II:** Strategy & economics of IT -- The new fit between technology and business strategies, IT-induced changes in firm boundaries, leveraging IT for cost and value leadership, IT and switching costs, integrating into business partners' value networks, IT enabled new business models, etc.

**Theme III:** Justifying IT decisions: ROI, risk assessment, options approach to IT investments, managing portfolio of IT investments, enterprise systems projects.

**Theme IV:** Leveraging customer knowledge in a digital world

**Theme V:** Business process outsourcing, IT compliance, etc.

## Required Course Material

1. Readings packet (Available at the University Duplicating Service on the 3<sup>rd</sup> floor of the McCombs School)
2. Additional material will be posted on the Blackboard and also handed out in class

## Grading

Your course grade will be based on the following point distribution:

ITEM	Date	Weight
1 group assignment (ROI Assessment)	11/30	11%
3 Case Write-ups	09/26, 10/12, 11/02, 11/23	24%
Midterm Exam	October 21	25%
Final Exam	12/14	35%
Course participation		5%

A grade of X (incomplete) is very uncommon, and will be given only for highly unusual circumstances as determined by the professor (e.g., medical emergencies for you or your immediate family members that occur after the official drop date). You are required to provide sufficient evidence of the problem and notify your professor as soon as it occurs. **NOTE:** A student receiving an incomplete grade in the course is required to complete such work by the end of the next academic session. All absences from exams require the prior approval of the professor.

## Class Participation

In this class much of the learning is dependent on the accessing the combined knowledge and experience of the group. It is everyone's job to keep the discussion productive and moving forward. In evaluating your class participation grade, the following issues are considered:

- useful arguments expressed coherently and succinctly
- good analysis supported by case facts or your own experience
- relevance to previous contributions, i.e. ability to listen and build on what others say
- constructive disagreement
- regard, respect and acknowledgment of others' contributions
- readiness to contribute upon receiving a "cold call".

## Case Write-ups

Four cases will be discussed during the semester. You are individually responsible for short case study write-ups, about 4-5 pages, 12 font size, single spaced, due at the beginning of class on the day of the case discussion. Late submission will be rejected. The objective of this assignment is to help you prepare for the case discussion, and to maximize the value of the case discussion for the entire class. A set of questions for each case will be handed out in class two weeks in advance. Your write-up should address the questions based on the facts discussed in the case, and your own research through other sources. Case write-ups will be evaluated on the accuracy and details of facts, analysis and clarity of arguments. The four cases are:

1. Feb : "Hewlett-Packard"
2. March 12 : ""
3. March 2 : "."
4. April 23 : ""

## Exams

There will be a midterm exam on, and a non-comprehensive final exam. There will be a review session before each exam. On these exams, you will be responsible for the material in the readings packet, as well as any required readings distributed via Blackboard, the content of the lectures, and class discussion. The exams will consist of true/false, multiple choice, and short essay-type questions. Any requests for re-grading should be emailed to me within a week after the exam or project has been returned to you.

## Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 (voice) or 471-4641 (TTY) as soon as possible to request an official letter outlining authorized accommodations.

## Course Outline

No.	Date	Topic	Readings
1	1/16	Introduction to Information Technology Management: IT-enabled transformation	<ul style="list-style-type: none"> <li>• A. Barua and P. Konana, Chapter 1 (“IT-Enabled Transformation”)</li> <li>• McKinsey study “When IT Creates Value” (also known as “When IT Lifts Productivity”)</li> </ul>
2	1/18	IT-enabled transformation (continued)	<ul style="list-style-type: none"> <li>• A. Barua and P. Konana, Chapter 1 (“IT-Enabled Transformation”)</li> <li>• McKinsey study “When IT Creates Value” (also known as “When IT Lifts Productivity”)</li> </ul>
3	1/23	Business process improvements	<ul style="list-style-type: none"> <li>•</li> </ul>
4	1/25	Business process improvements (continued)	<ul style="list-style-type: none"> <li>•</li> </ul>
5	1/30	Strategic issues in IT	<ul style="list-style-type: none"> <li>• A. Barua &amp; P. Konana, Chapter 3 (“Strategic Aspects of IT”)</li> <li>• M. Porter, “Strategy and the Internet”</li> </ul>

6	2/1	Value Network Transformation	<ul style="list-style-type: none"> <li>• M. Porter and V. Millar, “How information gives you competitive advantage”</li> <li>• Adrian Slywotzky &amp; David Morrison, “Concrete Solution”</li> </ul>
7	2/6	<b>Case Study: “Hewlett-Packard,” HBS 9-505-065</b>	<ul style="list-style-type: none"> <li>• <b><u>Individual case report due at the beginning of class</u></b></li> </ul>
8	2/8	Economics of IT – Network effects & switching cost	<ul style="list-style-type: none"> <li>• TBA</li> </ul>
9	2/13	Network effects & switching cost (continued)	<ul style="list-style-type: none"> <li>• TBA</li> </ul>
10	2/15	ROI assessment of IT projects	<ul style="list-style-type: none"> <li>• “Pittsburgh Wire and Cable” will be posted on the Blackboard.</li> <li>•</li> </ul>
11	2/20	ROI assessment (continued)	<ul style="list-style-type: none"> <li>• . Pemex Gas</li> </ul>
12	2/22	<b>Case Study: “Online”</b>	<ul style="list-style-type: none"> <li>• <b><u>Individual case report due at the beginning of class</u></b></li> </ul>

13	2/27	<b>Review of midterm</b>	
14	3/1	Midterm (in class)	•
15	3/6	IT options	• TBA
16	3/8	IT options	<ul style="list-style-type: none"> <li>• R.G. Fichman, M. Keil and A. Tiwana, "Beyond Valuation: Options Thinking in IT Project Management," California Management Review, February 2005.</li> <li>• M. Jeffrey and I. Leliveld, "Best Practices in IT Portfolio Management," MIT Sloan Management Review, Spring 2004.</li> </ul>
17	3/20	<b>IT Options</b>	<ul style="list-style-type: none"> <li>• Dixit and Pindyck, "The Options Approach to Capital Investment" HBS Product # 95303</li> <li>•</li> </ul>
18	3/22	RFID ROI and Options Managing large IT projects: The case of enterprise integration	
19	3/27		•
20	3/29		•

21	4/3		<ul style="list-style-type: none"> <li>•</li> </ul>
22	4/5		
23	4/10	<b>Case Study &amp; Spreadsheet Exercise: “Charles Schwab in 2002”</b>	<ul style="list-style-type: none"> <li>• <b><u>Individual case report due at the beginning of class</u></b></li> </ul>
24	4/12	Enterprise integration (continued)	<ul style="list-style-type: none"> <li>• “Nestle’s ERP Odyssey”</li> </ul>
25	4/17	Collecting & using online customer knowledge	<ul style="list-style-type: none"> <li>• G. Loveman, “Diamonds in the Data Mine,” Harvard Business Review, May 2003.</li> </ul>
26	4/19	Online customer knowledge (continued)	<ul style="list-style-type: none"> <li>• Shapiro and Varian, Versioning</li> <li>•</li> </ul>
27	4/24	Linking customer knowledge with operational excellence	<ul style="list-style-type: none"> <li>• R. Gulati and J.B. Oldroyd, “The Quest for Customer Focus,” Harvard Business Review, April 2005.</li> </ul>
28	4/26	BPO	<ul style="list-style-type: none"> <li>• J. Linder, “Transformational Outsourcing,” MIT Sloan Management Review, Winter 2004.</li> </ul>
29	<b>5/1</b>	<b>BPO</b>	<ul style="list-style-type: none"> <li>• D. Mani, A. Barua and A.B. Whinston, “Of Process Analysis and Alignment: A Model of Governance in BPO Relationships,” UT Austin Working Paper, June 2005.</li> </ul>
30	<b>5/4</b>	<b>Review for Final Exam</b>	Group project “Business Intelligence Software at SYSCO” due electronically by 11:59 p.m. on May 4