Information Technology Management

MIS 381N (03735) Spring 2010

T Th 11:00 a.m. – 12:30 p.m. GSB 3.106

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Hours	: T Th 12:30 – 1:45 p.m. or by appointment

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: Economics of IT investments -- efficiency, productivity, business value, firm & economy-wide performance, the information economy, etc.

Theme III: Strategic alignment and competitive advantage through IT -- IT as a driver of strategies, the 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 IV: Justifying IT decisions: ROI, risk assessment, options approach to IT investments

Theme V: Exploring new business models enabled by IT

Required Course Material

1. Textbook: "Information Rules: A Strategic Guide to the Network Economy" by Carl Shapiro and Hal R. Varian, Harvard Business School Press 1998
   ISBN 10: 087584863X / 0-87584-863-X, ISBN 13: 9780875848631

2. Readings packet available at **IT Copy & Printing** (512 West Martin Luther King Blvd., Austin. Tel: 512-476-6662)

3. Additional material will be posted on the Blackboard

Grading

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

ITEM	Date	Weight

	(month/day)	
1 Group Case Study	4/29	11%
3 Individual Case Write-ups	2/9, 3/30, 4/15	24%
Midterm	3/04	25%
Final exam	5/06	30%
Course/class participation		10%

A grade of X (incomplete) is very uncommon and will be given only for unusual circumstances (e.g., documented medical emergencies for you or your immediate family members). You are required to provide sufficient evidence of the problem and notify me 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.

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, I take the following into consideration:

- 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 to class discussions

Case Reports

Several cases will be discussed during the semester. You are individually responsible for 3 case study write-ups, about 4 pages, 12 font size, single spaced, due at the beginning of class on the day of the case discussion. I have also assigned a group project (ideal group size is 4). Late submissions will not be accepted. The objective of these assignments 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 9 : "Hewlett-Packard" (individual)
2. March 30 : "B&K Distributors" (individual)
3. April 15 : "The San Diego City Schools: ERP ROI" (individual)
4. April 29 : "RFID at the Metro group" (Group project, 4 students per group)

Hewlett-Packard Case Study Questions

1. The case mentions several times HP's desire to be more customer focused. According to the case, what has HP done to become more customer focused? Have they achieved this objective? Does (can) IT play a role here? Justify your response.

2. Ms. Carly Fiorina wanted HP to be a unique combination of high tech, low price, and superior customer experience. Visit the HP web site as well as that of one of its key competitors and configure a custom PC. Based on your visits, do you agree that HP has achieved the above combination in its online PC business? Please justify your response.

3. If HP could operate with the same efficiency as Dell Inc. in inventory, receivables and payables management, what would be the $ impact on its bottom line? That is, how much money could it save by being as efficient as its closest competitor, everything else being equal? It may be the case that HP is already more efficient than Dell in some of these areas (in which case there is no further scope for improvement relative to Dell).

4. If you were running HP's PC business, what additional steps would you take with respect to (i) distribution channels and interactions with customers, (ii) supplier side operations? How would you manage potential channel conflict? In this question, assume that the company as a whole has decided not to quit the PC business.

Guidelines for writing the case report

A. Time management: For folks who have no exposure to the high tech sector, this case study should take between 8 to 9 hours. If you are not done after 9 hours of solid work, you are spending too much time on it, and need to talk to me immediately. For folks who have some experience in the high tech sector this study should consume 5 to 6 hours (the maximum time guesstimates provided below are for those without any prior exposure to high tech). Try to divide up the work across several days, working no more than 1 to 2 hours on this per day.

B. Start by reading the questions carefully. Then read the case slowly and thoroughly, and take notes on your computer/laptop as you go. For example, question 1 can be answered completely by reading the case. Reading the case thoroughly and answering question 1 should not take more than 2 hours.

C. Visit the company web sites – to answer question 2, visit HP and Dell's web site – note the ease of navigation, friendliness, and informativeness of the site (a part of the customer experience). Configure a PC with roughly the same configuration on HP and Dell's site. What difference do you see in terms of price, selection, availability and speed of delivery? This should not take more than 1 hour.

D. For question 3, we are looking for some numbers. Focus on the cash conversion cycle component comparisons between HP and Dell. A related article is provided below. This question should not take more than 1.5 hours. Use recent data (e.g., 2008 or 2009) whenever available.

http://www.fastcompany.com/magazine/88/dell.html

E. Your answer to question 4 should be based on all of the above. Look at the inefficiencies you observed in your answer to question 3, and your impressions of HP's web site and what they have done on the customer side (from questions 1 & 2). This should not take more than 1 hour.

The following article on the competitor's channel strategy may be useful:
http://insight.kellogg.northwestern.edu/index.php/Kellogg/article/a_new_channel_strategy_for_dell

F. Take up to 2 hours to revise the points you noted while doing the above in order to complete the report.

G. Please answer the four questions separately instead of providing an integrated analysis. In doing so, there may be a slight overlap between answers to some questions, but that is O.K.

H. I am looking for key points in your analysis. So there is no need to spend a lot of time framing sentences and paragraphs (even bullet points with enough explanation will do). However, your responses should be structured well, so that there is a logical flow of ideas and rationale.

I. Avoid repeating facts mentioned in the case – I am looking for your analysis and conclusions, and not the replications of facts from the case.

J. You are individually responsible for this case study write-up. It should be about 4 pages (12 font size, single spaced), and is due at the beginning of class on the day of the case discussion. Late submissions will be rejected. If you are unable to make it to class for some reason, please email me the report before class time.

K. Most of the questions require you to collect additional information above and beyond what is already in the case. This activity helps you develop one of the critical skills for managers, which is the ability to search, collect, and synthesize information that is available in the public domain and to make meaningful inferences.

Notes:

a. For individual assignments, please do not share your thoughts or case analyses with others.
b. Please cite the web addresses or any magazine articles that you use in your write-up. Please don't include the actual articles.

Course Agenda

Date	Topic	Readings
Jan 19	Introduction to ITM: Strategic and economic perspectives	.
Jan 21	How IT influences business strategies & decisions	• Read the first half of A. Barua and P. Konana, "IT-Enabled Transformation" in the readings packet. • G. Loveman, "Diamonds in the Data Mine," in the readings packet
Jan 26	IT & operational efficiency	• Read the first half of A. Barua and P. Konana, "IT-Enabled Transformation" in the readings packet.
Jan 28	Assessment of financial impacts of IT	• Read the second half of A. Barua and P. Konana, "IT-Enabled Transformation" in the readings packet.
Feb 2	Competitive advantage through IT	• Porter, "Strategy and the Internet" (in the readings packet) • Porter and Millar, "How Information Gives You Competitive Advantage" (in the readings packet) • "FedEx Corp: Structural Transformation Through e-Business" (in the case study section of the readings packet)

Feb 4	Aligning IT with business strategy	• Robert Gold, "Building the IT Organization Balanced Scorecard" • Robert Gold "Enabling the Strategy-Focused IT Organization" • Serena Frank, "IT Transformations Spur Enterprisewide Strategic Alignment"
Feb 9	**Case study: "Hewlett-Packard"**	• **Case analysis (individual) due electronically by the beginning of class**
Feb 11	Network effects and switching cost	• Shapiro and Varian, Information Rules" Chapters 5 and 6
February 16	Network effects and switching cost (continued)	• Shapiro and Varian, "Information Rules", Chapter 7
Feb 18	IT ROI Assessment	• Will be posted on blackboard
Feb 23	IT Options	• Dixit and Pindyck, "The Options Approach to Capital Investment"

Feb 25	IT Options	• Dixit and Pindyck, "The Options Approach to Capital Investment"
March 2	**Midterm Review**	
March 4	**MIDTERM (in class) worth 25% of final grade**	
March 9	No class	
March 11	No class	
March 23	IT options (continued)	• R.G. Fichman, M. Keil and A. Tiwana, "Beyond Valuation: Options Thinking in IT Project Management," California Management Review, February 2005.
March 25	Enterprise Integration with ERP	• Ben Worthen, "Nestle's ERP Odyssey", CIO Magazine

March 30	**Case study: "B&K Distributors"**	• **Case analysis (individual) due electronically by the beginning of class**
April 1	Enterprise integration with ERP	• Ben Worthen, "Nestle's ERP Odyssey", CIO Magazine
April 6	M&A IT and Business Process Integration	• TBA
April 8	Web 2.0 & online social networking	• "The Fairyland of Second Life: Virtual Social Worlds and How to Use Them"
April 13	Web 2.0 & online social networking	• "The Fairyland of Second Life: Virtual Social Worlds and How to Use Them
April 15	**Case study: "The San Diego City Schools: Enterprise Resource Planning Return on Investment"**	• **Case analysis (individual) due electronically by the beginning of class**

April 20	Online prediction markets	• "Prediction Markets at Google"
April 22	Online prediction markets	• "Prediction Markets at Google"
April 27	IT and Business Process Outsourcing and shareholder value	• TBA
April 29	**Case study: "RFID at the Metro Group"**	• **Case study report (group) due electronically at the beginning of class**
May 4	Final Exam Review	
May 6	**Final exam worth 30% of final grade**	