

Management Information Systems

Mexico City EMBA Program

Spring 2011

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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 -- 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 III: Justifying IT decisions: ROI, risk assessment, options approach to IT investments

Theme IV: Leveraging Data Analytics and Business Intelligence

Theme V: IT Project Management (A A Capote)

Theme VI: Enterprise Integration Thru IT applications & Tools(AAC)

Theme VII: IT Industry Structure and Segments(AAC)

Required Book

“Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel® with XLMiner” by [Galit Shmueli](#), [Nitin R. Patel](#), [Peter C. Bruce](#)

Other Required Course Material

1. Readings packet
2. Management Information Systems , K.C. Laudon and Jane P. Laudon, Pearson-Prentice Hall (Chapters 1,11,14 and15)
3. Additional material will be posted on the Blackboard

Grading

80% of your course grade will be based on the Professor Barua's section, while the remaining 20% will be assigned by Prof. A. Capote.

ITEM (Barua's section)	Date (month/day)	Weight in the final grade
1 Group Project (case		15%

competition)		
2 Individual Case Write-ups		25%
Take home final exam		30%
Course/class participation		10%

Capote's Section		
Group Project Case Presentation		70%
Class Discussions		20%
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. For Professor Barua's section, you are individually responsible for 2 case study write-ups, about 4 pages each, 12 font size, single spaced, due at the beginning of class on the day of the case discussion. 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.

There will be a case competition on the last day of class, where student groups (4-5 students per group, you are responsible for forming your own groups) will present their analysis of the "Air

France” case. Each presentation should last no longer than 20 minutes and should use PowerPoint slides. A certificate will be awarded to each member of the winning and runner-up teams.

The three cases are:

1. Jan 15: “Hewlett-Packard” (individual)
2. Feb 12: “RFID at the Metro Group” (individual)
3. May 6: “Air France” (Case competition: Group work + in-class presentation)

“Cemex: Global Growth Through Superior Information Capabilities”

1. Refer to the 2x2 framework in the article “How Information Gives You Competitive Advantage” by Michael Porter and Victor Millar (in the readings packet). In which quadrant would you place Cemex? Why?
2. How has Cemex built its information capabilities (including its e-business initiatives) at each stage of its growth in the last 20 years?
3. If Lafarge could operate with the same efficiency as Cemex in inventory and receivables management, what would be the financial benefits? How does IT contribute toward better inventory and receivables management at Cemex? Use 2005 financial data from www.morningstar.com to answer the first part of this question.
4. As a consultant to Cemex In 2003, what would you recommend regarding CxNetworks – Integrate CxNetworks back into the core business, use CxNetworks to explore growth opportunities, or sell CxNetworks and focus on core business? Justify your response.

Cemex Case Study Guidelines

CxNetworks was an initiative from Cemex to explore e-business opportunities. Perhaps the most important outcome was Neoris, the IT consulting arm that was spun off. Here is some info on Neoris:

"Neoris' origination as the IT outsourcing arm of CEMEX enabled the building of expertise and credibility in production and logistics-oriented industry environments, which it has successfully leveraged and expanded upon to extend into other vertical markets and geographies, including the U.S. market."(IDC Research)

Here is the link to Neoris: <http://neoris.com/>

Do remember that the question on CxNetworks requires you to provide a recommendation based on the data that was available when the case was written.

To answer the questions involving how IT has helped Cemex, the following two articles are a good complement to the information in the case. Here are the links:

http://findarticles.com/p/articles/mi_m0HWW/is_33_3/ai_66682402/

http://www.cio.com/article/30445/Business_Process_Improvement_at_Concrete_Co._Cemex

Here are some general guidelines for writing the report:

A. Your report should be between 3 and 4 pages (single spaced, 12 font size). Any additional material can be put in an Appendix with no page limit. The report is due electronically (BB submission) at the beginning of class on the day of the case discussion. Late submissions will be rejected.

B. Please answer the 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.

C. 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.

D. Avoid repeating facts and figures mentioned in the case – I am looking for your *analysis* and *conclusions*, and not just the replications of facts/figures from the case. Of course you need to use these facts and figures to support your conclusions. Here is an example. A company has spent a lot of money to develop a CRM system to capture customer data which would then be used for pricing its products. This is a *fact*. The corresponding *analysis* would be that the company decided to tap into customer knowledge and incorporate such knowledge into its operations (e.g., pricing decisions) to increase its financial performance (e.g., revenues and profitability).

E. Most of the questions require you to collect additional information above and beyond what is already in the case (the two articles plus other links I have provided are an excellent starting point, and may even be sufficient for this 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.

F. Please cite the web addresses or any magazine articles that you use in your write-up. Please don't include the actual articles.

Guidelines for Case Class Presentations (Capote's Section)

A. Start by reading case very carefully, including necessary complementary information and data.

B. Understand a complete picture of corresponding Market Place.

C. Study Competitive Players and influence on case context.

D. Develop a Complete Financials Analysis

E. Address questions posted with it's answers fully supported.

F. Add your own conclusions as a wrap-up.

Course Agenda

Date/time	Topic	Readings
Jan 8 (all day)	Introduction to Information Technology Management: Strategic and economic perspectives Overview of IT impacts	<ul style="list-style-type: none"> • A. Barua and P. Konana, Chapter 1 (“IT-Enabled Transformation”) in the readings packet.
Jan 14/15	IT ROI Assessment IT Options Managing large IT Projects: The case of ERP Case Study: “Cemex: Global Growth Through Superior Information Capabilities” (readings packet, case study section)	<ul style="list-style-type: none"> • Dixit and Pindyck, “The Options Approach to Capital Investment” HBS Product # 95303. • R.G. Fichman, M. Keil and A. Tiwana, “Beyond Valuation: Options Thinking in IT Project Management,” California Management Review, February 2005. • Case study: “B&K Distributors” • Cemex case due on Blackboard by the beginning of class on January 15

<p>February 11/12</p>	<p>IT & Competitive Advantage</p> <p>IT-Enabled Structural Transformation, IT & Competitive Advantage</p> <p>Network effects & switching cost</p> <p>Business innovations around social media: The case of Prediction Markets</p> <p>Case study: “RFID at the Metro Group”</p>	<ul style="list-style-type: none"> • M. Porter, “Strategy and the Internet” (HBS, Product # R0103D) • M. Porter and V. Millar, “How Information Gives you Competitive Advantage” (HBS, Product # 85415) • “FedEx Corp” case study • “Prediction Markets at Google: HBS 607088-PDF-ENG” • RFID case study due on Blackboard by the beginning of class on February 12
<p>May 5/6</p>	<p>Data analytics and business intelligence</p> <p>Case competition: “Air France Internet Marketing: Optimizing Google, Yahoo! MSN, and Kayak Sponsored Search”</p>	<ul style="list-style-type: none"> • “Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel® with XLMiner” by Galit Shmueli, Nitin R. Patel, Peter C. Bruce • Student groups (5 students per group) will present their analysis of the case in class. Submit a PowerPoint file on the Blackboard by the beginning of class on May 6
<p>TBA</p>	<p>Take home final exam worth 30% of final grade</p>	

Date / Time	Topic	Readings
March 12 Part I 12:30 – 14:00	IT Project Management Building and Managing Information Systems <ul style="list-style-type: none"> • Organization Redesign with Information Systems. 	<ul style="list-style-type: none"> • Chapter 14 & 15 Managing Information Systems, K.C. Laudon and Jane P. Laudon Pearson – Prentice Hall

Following please find A A Capote's Section...

	<ul style="list-style-type: none"> • Understanding the Business Value of Systems and Managing Change. • Managing International Information Systems <p><u>Class Discussion</u> “The IBM Company internal re-invention”</p>	<ul style="list-style-type: none"> • IBM Corporation Annual Reports 2002-2003-2004 • Saving Big Blue: Leaderships Lessons and turnaround tactics of IBM’s Lou Gerstner Robert Slater Mc Grow Hill, 1999
March 12 Part II 15:00 – 17:30	<p>Enterprise Integration thru IT Applications and Tools.</p> <ul style="list-style-type: none"> • Business Process Integration • Enterprise Systems • Supply Change Mgmt Systems • CRM • Enterprise Integration Trends • Management Opportunities, Challenges and Solutions. <p><u>Case Assignment</u> IBM “ On demand Business”, Download at: www.hbsp.harvard.edu</p>	<ul style="list-style-type: none"> • Laudon & Laudon Chapter 11 • Necessary Information to complement case-study information.
Apr 9 Part I 12:30 – 14:00 Part II 15:00 – 17:30	<ul style="list-style-type: none"> • Case, Presentation and Discussion • Mexico’s IT Industry Structure & Segments • Executive Dialog 	