

University of Texas at Dallas
MIS 6204
Cohort MBA
Information Technology Foundations
Spring 2009

Professor Vijay S. Mookerjee

Class meets on Wednesdays 9 am – 12:45 pm

Office No.: SOM 3.429

Office Hrs: By appointment.

Phone No.: 972-883-4414

Email: vijaym@utdallas.edu

Teaching Assistant Information

Readings

Readings and case packet available at bookstore

Other readings will be posted online on WebCT or handed out in class

INTRODUCTION

The rapid pace of change in Information Technology (IT) has made it critical for managers to possess a conceptual understanding of IT and how IT creates value at the individual as well as at the firm level. We will begin with a study of the IT architecture of a contemporary firm and focus on the three pillars of IT architecture: data management, knowledge management, and telecom management. Next, we will discuss each of these components in detail using in-class, hands-on sessions to obtain a deeper understanding. We will also consider the role of emerging IT infrastructure in transforming business activities.

We then move to a higher level of analysis and consider strategic implications of IT. IT facilitates the creation and operation of a virtual network of organizations enabling each firm to focus on its core competencies. Effective use of IT can radically alter the value proposition delivered to customers and enable firms to respond to customer demand more efficiently and expeditiously. We will discuss how IT may provide a source of competitive advantage and how we may assess the business value of IT.

During class discussions, we will mainly be concerned with decisions that managers make to *make the most* of IT resources available to them. Our interest is in understanding how the challenges presented by information technologies differ from those presented by other firm resources. Our approach will be analytical in nature, sometimes theoretical, and seldom merely descriptive. We will be interested in tools and concepts that enhance our ability to define and analyze IT problems and alternative solutions to them.

LEARNING OBJECTIVES

As a result of our work together you should:

1. gain a better understanding of the role that information technology (IT) plays in the firm.
2. better understand how the capabilities provided by information technologies (IT) can enable a firm meet its objectives, including enabling a firm to gain competitive advantage.
3. become better informed consumers of IT resources.
4. be able to use tools and theories developed in other courses, to better manage your firm's information technology resources.
5. obtain an understanding of some of the theoretical models that are used the design and operate information systems.

GROUP PRESENTATIONS

20 minute presentation on an IT related topic. A short write up (1 page max.) on the topic is due on the day of the mid-term exam (Feb 4).

EXAMS

There will be two open book exams.

COURSE POLICIES

Meaningful Class Participation: Active, consistent participation in class is an essential part of the learning experience. We will be using cases and readings and you must prepare them, either individually, or preferably, with a study group. Meaningful participation in the class discussion is valued and needed. Meaningful participation means making a contribution to our discussion, not merely talking, and it does not mean repeating facts in the readings or simply agreeing with what others have said. Nor does it mean making a point here or there. Our interest is not in "right" or "wrong," it is whether you have made a contribution to the development of the issues under study; whether you have moved the class forward. One clear way of making a contribution is to critically evaluate the comments of your classmates where needed; it is not the instructor's duty alone to decide whether a remark is of value. Failure to participate and disagree where needed, penalizes you and the class in many ways: (1) you lose incentive to prepare the readings and case properly; (2) you lose the chance to develop oral communication skills; (3) you deprive all of us of your insights into the reading material and case; (4) your ideas do not get scrutinized and evaluated by others.

COURSE GRADE

Your final grade in this component is a function of the following elements:

Element	Weight
<u>Group</u>	
• Case write ups	40
• Presentation	20
<u>Individual</u>	
• Exams	30
• Class Participation	10

SCHEDULE

JAN 14	INTRODUCTION	SESSION 1
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Lecture Course organization and discussion of the course. Discussion of the terms information, management, systems, and information technology to provide an understanding of how these have changed over time and where they are likely to go.

Discussion

1. What would you consider to be important IT knowledge for today's managers
2. Is IT *over*? In other words, should companies view IT as a source of competitive advantage, or something in the sense of a "must have" similar to a utility such as electricity, janitorial services, or freight?

(Use the web to find what Nicholas Carr has to say on the above question.)

Case

Cisco

Submission Questions

1. Cisco is frequently characterized as an information age company, in contrast to an industrial age company. In your opinion, what factors distinguish Cisco as an information age company?
2. To what extent does IT contribute to Cisco's strategy?
3. How would you characterize the role of Pete Solvik as CIO?

JAN 21	DATA & KNOWLEDGE MANAGEMENT	SESSION 2
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Readings

Data Modeling Handout

Lecture

A crucial aspect of the IT architecture of any modern firm is its data. In this session we will cover the basics of data management as well as some recent advances in database technology, including Data Warehouses, Data Marts, and On-line Analytic Processing. We will also study Entity Relationship Diagrams (ERD) that are used to design a database. An ERD provides a "high-level" view of an organization's data and the relationships (constraints) that exist within the data. ERDs are used extensively by organizations to develop and organize their overall data requirements.

Readings

None

Lecture

Information systems use processes to manipulate data. In this session, we will study decision tables and trees as tools to represent and refine decision processes within the organization.

Discussion

Think of an example of a set of rules used to make a decision. What would these rules be?

JAN 28	APPLICATIONS	SESSION 3
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Case

Capital One

Submission Questions

1. How is Capital One's use of IT different from other mass customization strategies?
2. How sustainable is Capital One's advantage?
3. What are the consequences of Capital One's IT strategy for expansion into different segments of the credit card industry, and into other industries?

Case

Akamai Technologies

Questions for Submission

1. Discuss Akamai's business model and whether it makes sense. Hint: Use Porter's 5 force model.
2. What are the key technologies used in CDN? What are some alternatives to CDN services?
3. Discuss how Akamai should price its services, now and in the future?

FEB 4	EXAM I & IT SECURITY	SESSION 4
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Open book exam of about 1 to 1.5 hours covering the topics so far.

Presentation Topic write up due (1 page max)

Readings

I-Premier Case

Questions for Submission

1. How well did the I-premier perform during the 75 minute attack? What would have done differently if you were Bob Turley?
2. The CEO had expressed concerns that the company's operating procedures were deficient in response to such attacks. Do you agree? What additional procedures can you propose?

3. In the aftermath of the attack what would you be worried about? What actions would you recommend?

FEB 11	FINANCIAL EVALUATION OF IT	SESSION 5
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Readings

None.

Lecture Pricing of a congestion-based IT service

Readings

Dos Santos, B., "Justifying Investments in New Information Technologies," *Journal of Management Information Systems*, Spring 1991.

Lecture Approaches to evaluating IT investments

FEB 18	IT & STRATEGY	SESSION 6
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Readings

Porter, M., "Strategy and the Internet," *Harvard Business Review*, Mar-Apr 2001, pp. 63-78.

Case

Matching Dell

Questions for Submission

1. How and why did the PC industry come to have such low average profitability?
2. Why has Dell been so successful despite this?
3. How big is Dell's remaining advantage and what should its major rivals do now?

FEB 25	PRESENTATIONS	SESSION 7
	EXAM REVIEW	

MARCH 4	EXAM 2	SESSION 8
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