CIS 5313: Strategic Information Systems
Spring 2005

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Mary Hernandez
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REQUIRED TEXT

Managing Information Technology
E. Wainright Martin
Carol V. Brown
Daniel W. DeHayes
Jefferey A. Hoffer
William C. Perkins
Prentice Hall, 2002

SUPPLEMENTARY TEXTS

Competitive Advantage through Information Technology
Jack D. Callon
The McGraw-Hill Companies, 2000

Information Systems Management in Practice
Barbara C. McNurlin and Ralph H. Sprague
Pearson/Prentice hall, 2004

COURSE OBJECTIVES

Information technology (IT) is a strategic asset. Successful deployment and utilization of IT is a must in order for a business to succeed and gain competitive advantage. The net result is a growing demand for guidance on the issues, strategies, tactics for using and managing IT.

The course first introduces students to issues related to the use of IT for increasing organizational performance and productivity, and for gaining strategic and competitive advantage. It helps students identify problems and opportunities that are appropriate for IT applications and show how information technology can be utilized to address these problems and opportunities. The objective here is to derive guidance for today's and tomorrow's executives based on the experience of others.

Profile

Dr. M. Adam Mahmood is a tenured professor of Computer Information Systems at the Department of Information and Decision Sciences. He also holds the Ellis and Susan Mayfield Professorship in the College of Business Administration. He is a visiting faculty at the Helsinki School of Economics and Business Administration, Finland and University of Canterbury, New Zealand. Prior to joining the University of Texas at El Paso, he taught at the University of Missouri at St. Louis and worked for NASA as a visiting scholar in its Jet Propulsion Laboratory at Pasadena, California. He received his Ph.D. in Management Information Systems at Texas Tech University.

Dr. Mahmood's scholarly and service experience includes a number of responsibilities. He is presently serving as the editor in chief of the Journal of Organizational and End User Computing. He has also recently served as a guest editor of the International Journal of Electronic Commerce and the Journal of Management Information Systems. He has served two one-year terms as president of the Information Resources Management Association, an international professional organization that includes educators, researchers, and practitioners from over 50 countries. He has also served for two years as president of the Faculty Senate at the University of Texas at El Paso and a member of the University of Texas System Chancellor's Advisory Council. In 1997 and again in 1998, because of "his accomplishments as a highly respected professional in his field, he was invited to be a member of American Who's Who and International Who's Who of Professionals. In 1997, because of his technical expertise and leadership role, former Governor Bush appointed him to a Texas State Board. In 1998-99 and again in 2002-2003, because of his scientific contribution, he has been recognized by American Men & Women of Science "as being among the most distinguished scientists in the United States and Canada." In 2001 the International Biographical Centre of Cambridge, England named him as one of the 2000 Outstanding Scientists of the 20th Century. Also in 2002 Governor Perry appointed him to the State Board of Directors that oversees the Texas Department of Information Resources.

Dr. Mahmood's research interests center on the utilization of information technology including electronic commerce for managerial decision making, strategic and competitive advantage, group decision support systems, and information systems success as it relates to organizational and end user computing. On this topic and others, he has also published four edited books and over 85 technical research papers in some of the leading journals and conference proceedings in the information technology field including *Management Information Systems Quarterly, Decision Sciences, Journal of Management Information Systems, European Journal of Information Systems, INFOR -- Canadian Journal of Operation Research and Information Processing, Journal of Information Systems, Information and Management, Journal of End User Computing, Information Resources Management Journal, Journal of Computer-Based Instruction, Data Base*, and others. He has also presented papers in a number of regional, national, and international conferences. In recognition of his research, he has received a number of "outstanding research" awards various professional organizations. During the last few years, Dr. Mahmood (with L. Gemoets) had received over $250,000 in research funds from NASA/JPLand other sources.

Professor Mahmood teaches a number of graduate and undergraduate computer information systems courses including strategic and competitive information systems, electronic commerce with Dreamweaver and ColdFusion, database management systems with Oracle and SQL, management information systems, decision support systems, information technology policy and management, and artificial intelligence and expert systems. In addition to teaching, he also supervises master's theses, professional reports, and doctoral dissertations. Most of these theses and professional reports have resulted in publications with the students and faculty colleagues in refereed research journals. In recognition of his teaching, he has also received a number of teaching awards.

The course then covers issues related to managing IT especially in the new digital economy. The evolution of IT continues to present management with rewarding, yet risky, challenges. The objective here is to help students get a handle on managing IT to obtain organizational efficiencies, effectiveness, and competitive advantage.

This is followed by an exploration of IT for supporting decision making, collaboration, and knowledge work. The idea here is to acquaint students with tools available for applying and managing IT.

The course will end by providing coverage of the processes that are available for acquiring IT resources. It will especially cover the in-house development, outsourcing, and end-user development issues.

COURSE ORGANIZATION

The course utilizes a combination of lectures, class discussions, case analyses, and reviews of past research studies. Evaluation is based on three examinations, class participation, a topical paper, a hands-on application project, and a case study.

STUDENTS RESPONSIBILITIES

Students will need to accomplish the following in order to pursue the course objectives:

Prepare and discuss assigned cases and readings as a class participant. This will help you do well in the class participation part of the course.

Complete all homework assignments and do well in these assignments.

Take three examinations including the non-comprehensive final and do well in these examinations. Please pay special attention to the materials covered and emphasized in the class.

Prepare a topical white paper (team of 3). Please follow the guidelines provided for handling the topical white paper in the next section.

Prepare a written analysis of a case (team of 3). Please follow the guidelines provided for handling the case analysis in the next section.

Design, develop, and implement a Website proposed in your business plan using the Macromedia Dreamweaver software (team of 3). Again, please follow the guidelines provided for the designing the Website in the next section.

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As obvious from the aforementioned, all assignments will be carried out in groups of 3. Students will, therefore, be required to form teams of 3. Each team member is expected to contribute equally to all assignments. All team members in a team will receive the same grade.

It is recommended that each group consists of at least one technically-oriented student. Keeping this in mind, please team up with those that you think will work well with you in a group. **I will need team members' name for each team by the end of the second class period.**

EXAMINATIONS

Three tests will be given during the semester. Each test will be worth a maximum of 100 points. Each test will consist of a number of short-answer, multiple choices, and/or case type questions on the materials covered during that part of the semester for which the test is given. Students will not be tested on any materials that are not covered in the class. In order to do well in the test, students will need to pay special attention to the materials discussed in the class.

No tests will be made up unless arrangements have been made prior to the scheduled time of the test. Even then you must have a very good reason for not taking a test during its scheduled time (going out of town is not a very good reason; I expect you and your employer to arrange out-of-town trips around the scheduled tests). If I can not be contacted prior to the scheduled time, you must contact my departmental administrative secretary at the aforementioned telephone number. If for some reason, you cannot do that, ask a friend or a family member to call the secretary for you.

WRITTEN ANALYSIS OF A CASE

A comprehensive Real World Case will be assigned for written analysis.. In addition to answering case questions provided at the end of the case, you need to follow a system solution methodology, when appropriate, for analyzing the case. It consists of seven steps: (a) identification of problems, opportunities, and symptoms; (b) statement of the problem, (c) summary of alternative solutions, (d) evaluation of alternative solutions, (e) rationale for the selected solution, (f) information system designed proposal, if any, and (g) implementation plan, if any. The case analysis is due at the start of class on the due date and is worth 25 points.

Please follow the following guidelines in preparing your analysis.

> The case analysis must be word-processed. It should have one inch margin on all sides. The name of the case, your name, date, and course number should be printed on the front page.

> The case analysis should be limited to a maximum of five double-spaced pages of text excluding tables and graphs used, if any.

Please proofread the analysis carefully and use a spell-checker to correct all errors before turning it in.

You may use supplementary materials to improve your analysis. All supplementary materials, if used, must be referenced in the analysis.

Your grade will be based on readability factors (including grammar, punctuation, organization, and style), completeness, and correctness of your analysis.

TOPICAL WHITE PAPER

Each team will produce an in-depth and substantive, evidence and judgment-based analysis of one particular issue of information systems that is discussed in the course. The objective of the assignment is to reinforce specific components of information systems covered in the course. The possible topics include, among others, strategic and competitive information systems; the internet economy; customer relationship management; information systems advertising including web advertising; security techniques for information systems including eCommerce securities; and legal, ethical and regulatory environmental issues for information systems including Web-based systems.

On the second day of the class, each team must choose a topic. The topical paper is due in the beginning of the class on the due date. It is worth 35 points.

Please follow the following guidelines in preparing your topical paper.

The paper must be word-processed. It should have one inch margin on all sides. The title of the paper, the team members' name, date, and course number should be printed on the front page.

The paper should be limited to a 15 to 25 double-spaced pages of text excluding tables and graphs, if any.

Please proofread the analysis carefully and use a spell-checker to correct any errors before turning it in.

You should use supplementary materials to improve your analysis. All supplementary materials, if used, must be referenced in the and cited at the end using APA guidelines.

Your grade will be based on readability factors (including grammar, punctuation, organization, and style), in-depthness, completeness, and correctness of your analysis..

BUSINESS PLAN AND WEB DESIGN PROJECT

Each team will first develop a business plan (about 5 page long) for a business-to-consumer business for which your team is asked to create a Website, The plan will outline the product or service line for the company, describe how the site will operate, and detail its benefits to the company.

More specifically, in your plan you should cover the following issues: a discussion of the reasons for creating the Website; overall goals and objectives of your Website; and how it will address the identified goals; a description of the main product or service idea; competitive advantages your Website will provide to the your company. The business plan will be worth 15 points. You may consult the following web site, among others, before writing your business plan: http://www.bplans.com/sample/

In this project, each team's basic task is to design, develop, and implement a Website that is competitively positioned to take advantage of a market niche identified in your business plan. This will involve prototyping and testing the site. The site must provide product or service descriptions and policy pages. It should allow browsing of different products and services that are offered by the company.

Each team will present their project in the class on the day projects are due (see schedules). The project will be worth 35 points. Each will be graded on appearance, ease of use, correct use of links, accuracy of contents, and the thoroughness of coverage of the objectives defined in the business plan. Final grade for the project will be based on judges' ratings, if used, TA's ratings, and professor's ratings. All group members in a team will be assigned the same grade.

You may consult the following web sites, among others, on design of commercial web sites: http://www.wpdfd.com/wpdhome.htm

CLASS PARTICIPATION AND INDIVIDUAL BEHAVIOR

Class participation will be worth 25 points.

You will be required to analyze cases, answer questions, and participate in discussions based on chapters, cases, and outside materials. If you do not voluntarily participate, to help you do well in this part of the course, you will be asked questions and you will need to answer them.

Please read the text materials and go over the questions at the end of each assigned case before class. This will help you do well in class participation.

To help us all get acquainted as quickly as possible, during the second class day, a seating chart will be distributed and you will be asked to write your name on a seat you wish to seat. Please use the same seat for the remainder of the class. .

Please do not disrupt the class by unnecessarily talking in the class, walking in late, or leaving early. If you do so, your class participation score will be adversely affected.

Please turn off your cell phone, pager, and monitor during the class period. You may leave the monitor on during the lab period. If you don't do so, you will receive a failing grade in class participation.

Please do not make copies of copyrighted materials. As you already know, itt is against the law to do so.

OVERALL GRADE

Your overall course grade will be based on the accumulated total of your tests score, case analysis score, topical paper grade, business plan score, Web design score, and the class participation score.

At the end of the semester, the 90% and up = A (4.0), 80 to 89% = B (3.0), 70 to 79% = C (2.0), 60 to 69% = D(1.0), and below 60% = F (0.0) grading scale will be used to assign letter grades. However, there will be a review of total points earned at the end of the semester to ensure that students in comparable performance groups receive the same grade.

SCHEDULE

Dates	Text Readings
January 11	Introduction and class orientation
	Strategic and Competitive Information Systems
	Business Competitive Environment (JC Chapter 2)
January 18	**Teams are formed. The Case is assigned.**
	The Porter Competitive Model for Industry Structure Analysis (JC Chapter 3)
	Information Systems Can Redefine Competitive Boundaries (JC Chapter 5)

January 25   **Topical Paper Topics are due via email or in class**

Using Information Systems to Compete: A Success Factor Profile
(JC Chapter 12)

February 1   Strategic Uses of Information Technology (MS Chapter 3)

The Case Analysis is due. Topical Paper topics are assigned.

Information Systems Management Issues

February 8   Business and Information Systems Management Challenges (JC Chapter
1)

Review for Examination 1

February 15   **Examination 1 based on Chapters JC2, JC 3, JC5, JC12,MS3, JC1,
and any outside materials covered during this part of the semester**

February 22   Setting a Direction for Information Resources (MBDHP Chapter 13)
Managing Technology Resources (MBDHP Chapter 14)

March 1   **Topical Papers are due.   Start Working on Web Design
Project Business Plan**

Managing the Information Systems Function (MBDHP Chapter 15)

March 8   Integrating Information Systems into the Business Plan (JC 15)

March 15   **Business Plans for the proposed Web Design Project is due. Start
working on the Web Design Project**

Dreamweaver Presentation in the CALC Lab 310

March 18   **Course Drop Deadline with an Automatic "W"**

March 29   **Examination 2 based on Chapters MBDHP13, MBDHP14,
MBDHP15, and JC 15, and any outside materials covered during this
part of the semester**

Information Systems Acquisition Issues

April 5   Basic Information Systems Concepts (MBDHP Chapter 8)

Application Development by Information Systems Professionals (MBDHP Chapter 9)

April 12   Alternative Approach: Purchasing Systems (MBDHP Chapter 10)
                  Facilitating User Computing (MBDHP Chapter 11)

                  Information Systems Support for Knowledge Work

April 19   Managerial Support Systems ((MBDHP Chapter 6)

April 26   **Web Design Project is due**

                  Supporting Decision Making (SP Chapter 11)
                  Supporting Collaboration (SP Chapter 12)

May 3   **Final Examination (7:00-9:45 p.m.) based on Chapters ((MBDHP6,
                  MBDHP8, MBDHP9, MBDHP10, MBDHP11, SP 11, and SP12, and
                  outside materials covered during this part of the semester**

SCHOLASTIC DISHONESTY

"The University of Texas at El Paso prides itself on its standards of academic excellence. In all matters of intellectual pursuit, UTEP faculty and students must strive to achieve based on the quality of the work produced by the individual. In the classroom and in all other academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP."

"Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student of the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP) and available in the Office of the Dean of Students, may result in sanctions ranging from disciplinary probation, to failing grades on the work in question, to failing grades in the course, to suspension or dismissal, among others."