

Michael F. Price College of Business
Division of Management Information Systems
MIS 3363 -- IT Infrastructure
Spring 2004

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| Section 1 12:00 - 1:15 TR Classroom AH 112 | Section 4 1:30 - 2:45 TR Classroom AH 355 |
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Instructor: Dr. Jasperson
Office: AH, 308A
Phone: 325-2487
E-Mail: jjasperson@ou.edu
Webpage: <http://faculty-staff.ou.edu/J/Jon.L.Jasperson-1>
Office Hours: 4:00 - 5:00 p.m. TR and by appointment

“The University of Oklahoma exists for the students . . . but the university cannot give you an education -- it can only help you acquire one for yourselves. The main effort must be made by the students.”

(Former OU President George Lynn Cross -- 1952)

Course Overview and Objectives

According to the Merriam-Webster OnLine dictionary (<http://www.m-w.com>), the word “infrastructure” means 1: the underlying foundation or basic framework (as of a system or organization) 2: the permanent installations required for military purposes 3: the system of public works of a country, state, or region; *also*: the resources (as personnel, buildings, or equipment) required for an activity.

During the semester, we will see how this general definition can be applied in the context of information technology (IT). We will examine IT infrastructure concepts and technologies within the context of the business enterprise. The content of the course is divided into five sections: 1) overview & introduction, 2) computer organization & architecture, 3) operations & communication, 4) networking, and 5) management issues.

At the end of the course successful students should be able to:

- ✓ Understand the fundamentals of computing and communications hardware and software.
- ✓ Identify basic issues and trends in developing effective enterprise architectures. Be able to evaluate systems architecture and identify consequences of proposed systems changes and architectural modifications within a business context.
- ✓ Define and understand IT infrastructure concepts in the context of the business enterprise. Identify issues and trends in planning for, evaluating, and maintaining an effective IT infrastructure in relation to general business goals and strategies.
- ✓ Read trade literature and utilize related online resources. Understand the significance of articles and other resources encountered, and determine how to apply knowledge gained from these resources to business situations.

- ✓ Communicate with technology specialists. Be able to communicate system requirements and understand fundamental strengths and weaknesses of technical proposals, as they relate to IT infrastructure.
- ✓ Communicate with business specialists (including users and managers). Be able to determine and communicate system requirements in the context of the business environment. Understand fundamental strengths and weaknesses of business proposals as they relate to IT infrastructure.
- ✓ Understand and demonstrate professional business behavior and produce deliverables in accordance with professional-level standards.

Course Materials

REQUIRED Burd, S. D. *Systems Architecture*, (4th ed.) Course Technology, Boston, MA, 2003.

OPTIONAL White, R. *How Computers Work*, (6th ed.) Que, 2002.

Occasionally additional reading and study from outside sources may be required or recommended. These sources will include, but are not limited to, recent newspapers, business journals and monographs, and the World Wide Web. Any such reading/study assignments will be announced in class by the instructor.

Grading and Course Requirements

The course requirements and evaluation of each student's work in the course are based upon performance in several areas. Grade contributions and letter grade determination are shown below.

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|---------------------|-------------|----------------|--------------|
| Midterms (2)* | 50% | Percent | Grade |
| Team Project | 25% | 91-100 | A |
| Homework | 10% | 81-90 | B |
| Team Bowl | 5% | 71-80 | C |
| Article Summaries | 5% | 61-70 | D |
| Class Participation | 5% | 0-60 | F |
| Total | 100% | | |

***Please Note:** If a student's average score across the two midterm exams is less than 70%, the highest grade the student may earn for the course is a "D." This rule applies regardless of the student's performance in other areas of the course. If a student's average exam score is less than 70%, the student will earn a final grade of "D" or "F" based on the student's average exam score.

Midterms. There will be two midterm examinations. Each midterm exam is worth 25% of your final grade. These examinations will cover material from text readings, class discussions, guest lectures, and outside readings.

Team Project. The team project will give you an opportunity to apply what you have learned about IT Infrastructure to a specific business situation. There are three parts to the project: 1) researching and analyzing the business situation of a specific organization, 2) assessing general IT Infrastructure needs and solutions for the

organization (based upon their business situation), and 3) expanding upon one or two of the identified IT Infrastructure needs/solutions with a technical IT Infrastructure Plan.

Details on the project will be posted on Blackboard. The project is due on April 23, 2004 at 4:25 p.m. Teams should make every effort to complete the project early. Those who wait until the last minute risk delays with the computer facilities (i.e., down time, printer jams, computer crashes, etc.) and availability of the instructor.

Work turned in late will be discounted by 25% no matter what the reason. Projects turned in more than 2 hours late will not be graded (i.e., all students on the team will receive a zero grade for the assignment). Projects are considered late if they are turned in after the specified time on the due date.

Homework. There will be 11 homework assignments during the semester. Homework assignments are individual assignments; therefore, the work is to be performed by the individual submitting the work for grading.

Each assignment will be worth 1 point and will be graded on a credit/no credit (i.e., 0 or 1 point) basis. To receive credit for a homework assignment it must be complete and reflect "good effort." Only 10 total points will be allocated to your homework grade. Thus, you may earn an "extra credit" point to apply to the rest of your grade by submitting all 11 homework assignments. (Alternatively, you may elect to only submit 10 homework assignments.) No late homework will be accepted.

Homework is always due at the beginning of the class period on the due date. Submitted assignments should look professional (i.e., use a word processor and staple multiple pages together).

The requirements for these assignments will be made available on the web. You will be expected to view and use the documents online or download and print the assignment from the web (see the "Electronic Course Support" section for the URL and instructions).

I do not accept homework via email. If you will miss class, email your homework to a team member and ask that s/he submit your work for you.

Team Bowl. Team Bowl is an exercise that combines individual testing, group testing, and teamwork in a competitive environment. The team bowl exercise will be used to test you on materials covered after exam 2, to provide you and your teammates opportunity to study and to work together as a team, and to have some fun. As an incentive, there will be a prize for the top scoring team in each section. Team bowl details will be discussed later in the semester.

Article Summaries. Each student will have the opportunity to summarize 5 articles during the semester. For each article summary, you will identify an IT infrastructure related article published during the semester; read and provide a written summary of the article; and present the content of the article to the class.

The objectives of this assignment are for each student to: 1) gain experience reading IT infrastructure-related periodicals, 2) gain experience condensing findings into an “executive summary” and 3) be exposed to a wider range of infrastructure-related business situations and products/services.

In-class presentations will begin on February 3. For each of the remaining days in the semester, 5 students will be selected to present 1 article summary each to the rest of the class. The article you read, summarize, and present must match the posted topic for the day from the course schedule. We will not have presentations on review days or exam days (i.e., Feb 17, Feb 19, Apr 1, Apr 6, and Apr 29).

Each student will be randomly assigned 5 class days for presenting their article summary during class on January 27. The first few minutes of each class period will be dedicated to discussing article summaries. Additional details related to the article summaries are posted on Blackboard.

Class Participation. Class participation is based on participation in and contribution to in-class discussions. Students are expected to contribute to classroom discussions and activities. I will periodically give unannounced quizzes and/or in-class assignments. There are no make-ups allowed for any of these activities -- **no exception**. Your graded performance on these assignments and quizzes will be applied toward your class participation grade.

The quizzes and assignments will typically cover material from prior class discussions or from the assigned reading for the current class period. Completion of the chapter review questions and review of the key terms for each chapter are recommended as preparation for each class period.

No make-ups will be allowed for missed in-class activities. If you are not in class on the day of an in-class activity, you cannot participate in the activity and cannot receive points for the activity. There will be enough of these activities that missing one or two will not significantly impact your final grade.

Office Hour Policy

Office hours provide an opportunity for you to obtain specific guidance and help with your understanding of the material. The purpose of office hours is for you to obtain assistance in understanding the course material. I expect you to use them as your needs demand. I tend to be unsympathetic toward individuals with grade problems at the end of the semester who have never attempted to get help via office hours.

Electronic Course Support

I will rely extensively on electronic communication with the class. As information professionals, you should have the habit of regularly checking your e-mail. When I send e-mail message to the class, I will use the distribution list that the university has established for the course. This list will only send messages to your university account. If you use a different e-mail account, it is your responsibility to have messages forwarded from your university account to another account.

Links to the syllabus and other pertinent course information such as handouts and assignments can be found in the OU Blackboard system. You should check this website regularly to be informed of what is happening in the class. You can login to the Blackboard system at the following URL: (<https://ou.blackboard.com>).

Students With Disabilities

The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course (<http://www.dsa.ou.edu/ods>). The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 325-3852 or TDD only 325-4173.

Religious Holidays

It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required course work that may fall on religious holidays. Students **must** notify the instructor **in advance** of any such observances.

Academic Conduct

The University of Oklahoma has an Academic Misconduct Code that governs student academic performance in and out of the classroom. You can learn more about the academic misconduct code as well as your rights and responsibilities at the following URL: <http://www.ou.edu/provost/pronew/content/integritymenu.html>.

Academic misconduct is defined as “*any act that improperly affects the evaluation of a student’s academic performance or achievement.*” All students are responsible for submitting their own work for evaluation by the instructor. The steps and procedures as outlined in the Academic Misconduct Code will be followed in all cases of academic misconduct in this class.

Food and Drink in the Classroom

The Price College has spent a great deal of private and state funds to provide nicely furnished classrooms and computer labs. No food or drinks will be allowed in the classroom.

Class Policies

- *Do not engage in disruptive behavior in the classroom.* Interfering with your fellow students' ability to learn will not be tolerated.
- *Turn assignments in when they are due. I will not accept late homework assignments for grading.* “Late” means any time after the assignment has been collected in class by the instructor.

- *Be prepared.* Each student is expected to come to class fully prepared to discuss the material from the assigned readings. I will expect students to have read the text before class and rely on their preparedness to drive class discussions.
- *Attend class.* If you must miss class, it is your responsibility to find out what material, homework assignments, schedule changes, etc. you missed. Do not come to my office a week later and ask, “Did I miss anything?” (Assume that I would answer “yes” to this question.)
- *Arrive on time and stay for the duration of each class.* If you must be late to or leave early from class, please let me know beforehand and be as unobtrusive as possible. It is very disruptive to have students walking in and out during class time.
- *Take exams during the scheduled time.* If, due to emergency or illness, you know you will miss a scheduled exam, it is your responsibility to let me know ahead of time. Make-up exams may be oral, essay, or another format, as determined by the instructor.

Miscellaneous Class Notes

Problems. This is a very difficult course. Let me know, as early as possible, if you have trouble with the material, assignments, project, team members, etc. Ask questions during class. Come see me during office hours. Send e-mail messages. In short, if you are doing the work and need help, get it! I cannot help you if I am not aware of the problem. If you find yourself in a team that is causing problems which you and the team cannot work out, please come see me as soon as possible.

Privacy of grades. Scores and grades will be posted in the Blackboard system. If you would like to have your scores and grades posted, please indicate your desire on the student information sheet. I do not discuss scores or grades over the phone or via e-mail.

Syllabus changes. The topics and dates as outlined in the course schedule are subject to change. All necessary changes will be announced and discussed in class. You are responsible for making sure you are aware of any such changes. However, the dates of the examinations will not change.

Course Schedule

| I. Overview and Introduction | | | |
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| Date | Class Discussion | Assignment | Homework Due |
| Jan 13 | Course Overview | | |
| Jan 15 | Computer Technology: Your Need to Know | SA-1 | Good Teacher Essay |
| Jan 20 | What is "IT Infrastructure"? | LS-1 SA-14 (p.544-546) | Homework 1 |
| Jan 22 | Intro to IT Architecture Principles | LS-2 | |
| Jan 27 | Intro to Team Project and Article Summaries | | Team Membership |
| Jan 29 | Intro to Systems Architecture | SA-2 | Homework 2 |
| II. Computer Organization and Architecture | | | |
| Date | Class Discussion | Assignment | Homework Due |
| Feb 3 | Data Representation | SA-3 | Homework 3 |
| Feb 5 | Processor Technology & Architecture | SA-4 | |
| Feb 10 | Data Storage Technology | SA-5 | Homework 4 |
| Feb 12 | Systems Integration & Performance | SA-6 | |
| Feb 17 | Exam Review & Discussion | Handouts 1 & 2 | Homework 5 |
| Feb 19 | Midterm Exam 1 (Materials Covered to Date) | | |
| III. Operations and Communications | | | |
| Date | Class Discussion | Assignment | Homework Due |
| Feb 24 | Software Basics, Middleware & Applications | LS-3 Readings 1 | Milestone 1 |
| Feb 26 | Operating Systems | SA-11 | Milestone 1 |
| Mar 2 | | | Homework 6 |
| Mar 4 | File Management Systems | SA-12 | |
| Mar 9 | Data & Network Communication Technology | SA-8 | Homework 7 |
| Mar 11 | | | |
| Mar 16 | Spring Break -- No Class | | |
| Mar 18 | Spring Break -- No Class | | |
| IV. Networking | | | |
| Date | Class Discussion | Assignment | Homework Due |
| Mar 23 | Computer Networks | SA-9 | Homework 8 |
| Mar 25 | The Internet, Intranets & Extranets | SA-13 (p.517-523) Handout 3 | |
| Mar 30 | Internets & Distributed Application Services | SA-13 (p.503-516/523-540) | Milestone 2 |
| Apr 1 | Exam Review & Discussion | | Homework 9 Milestone 2 |
| Apr 6 | Midterm Exam 2 (Materials Covered After Midterm Exam 1) | | |

V. Management Issues

| Date | Class Discussion | Assignment | Homework Due |
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| Apr 8 | Security Issues & Solutions | LS-4 Readings 2 | |
| Apr 13 | | SA-14 (p.557-572) | |
| Apr 15 | Human IT Infrastructure Issues | LS-5 | Homework 10 |
| Apr 20 | Organizational Assessment & Performance Issues | LS-6 SA-14 (p.551-557) | |
| Apr 22 | Acquisition & Outsourcing Issues | LS-7 SA-14 (p.547-551) | Homework 11 Team Project (Apr 23) |
| Apr 27 | In-Class Student Evaluations and Regulatory Issues | LS-8 | |
| Apr 29 | Team Bowl Review | | |

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| May 6 | Section 002 Final Exam --- 1:30 - 3:30 p.m. |
| May 7 | Section 001 Final Exam --- 1:30 - 3:30 p.m. |

Course Schedule Legend

SA = *Systems Architecture* textbook
 LS = Lecture Slides posted on Blackboard