

Course Syllabus  
Modern Information Technology  
Business 352  
Fall 2004

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**Office Hours:** Tuesday & Thursday 8:15AM to 9:30AM and 12:45PM to 2:00PM  
Other times by appointment.

**Prerequisite:** Business 250

**Required Text:** Englander, Irv, *The Architecture of Computer Hardware and Software Systems: An Information Technology Approach*, third edition, John Wiley & Sons, Inc. New York, 2003.

**Course Description:** Introduction to IT hardware and software including computers, storage devices, telecommunications equipment, and system software.

**Course Objectives:** The course is designed to expose students to the concepts of information technology and system software. Illustrations of these concepts will be made to specific technologies and software. After the completion of the course, students will be able to:

1. Identify the general components of a computer.
2. Explain how the general components of a computer system function.
3. Understand the trends in information technology innovations.
4. Identify the general components of an operating system.
5. Explain how the general components of an operating system function.
6. Understand the trends in operating systems.

**Course Requirements:** There are several different sets of required materials for the course. All of these will be graded and the resulting scores included in the calculation of the course grade.

1. There will be two exams during the term. One exam will take place during the semester and is scheduled during a class period. The second exam is a **comprehensive** final examination held during finals week.
2. Quizzes will be administered in class on a regular basis. Each quiz will consist of approximately three to ten problems similar to those discussed in class and/or listed as exercises at the end of each chapter in the required textbook. Each quiz will cover material presented or assigned in the past two class periods. Time will be given during class periods to complete quizzes. The quiz scores will be averaged and this average included in the calculation of the course grade.
3. A project will be completed during the semester in a series of four installments. The project will culminate in the development of Visual Basic code to simulate CPU operations.

**Grading Policies:** The course grade will be calculated using the following weights.

Item	Weight
Examination 1	30%
Quiz Average	25%
CPU Simulation Project	10%
Comprehensive Final Examination	35%

**Project Policies:** As mentioned above, the project will be completed in a series of four (4) project installments or milestones. The following section describes these project installments regarding evaluation, grading and other rules/conditions. These policies are described below.

1. When an installment is submitted to the instructor, it will be either approved as acceptable or rejected as unacceptable.
2. If unacceptable, the problems (not solutions) with the installment will be noted for the student team. A rejected project installment must be revised and resubmitted to the instructor. The resubmitted project installment will be graded in the same manner as the original submission.
3. The determination of an installment's acceptability is based on the instructor's judgment on whether the team demonstrated that they mastered the skills required by the installment. Part of demonstrating this mastery is the appearance of the completed project installment. For example, work that is incomplete, sloppy, or disorganized will be considered unprofessional and unacceptable.
4. An unacceptable project installment automatically receives a 5% project grade penalty. If the project installment is not returned to the instructor in an acceptable form within the time period defined by the instructor, a 5% penalty is assessed for each 24-hour period until an acceptable installment is delivered. This is also the case if a resubmission is determined to be unacceptable. Weekends, vacations, and grading days do not count in the calculation of this penalty.
5. The instructor will notify the team that a project installment is unacceptable in class or via email. Upon this notification, the resubmission deadline is set for the calculation of penalty assessments. Because it is the responsibility of students to attend class, even if no team member is in class to receive this notification, this deadline will be enforced.
6. You must continue working on a project installment until it is acceptable and you may not submit any future installments until all preceding installments are determined to be acceptable. These later installments (that cannot be turned in until preceding installments are acceptable) are also subject to late penalties for missed deadlines.
7. Student teams must deliver all project installments and resubmitted installments to the instructor or make other arrangements with the instructor. Leaving a project installment in the instructor's mailbox or at his office door without prior arrangements is unacceptable.
8. All project installments must be accepted or the student team will receive an "F" for the course.
9. Any project installment submitted after 4:30pm on its deadline or due date will result in a 5% per day penalty against each team member's project grade.
10. If a project installment is graded as acceptable but contains technical difficulties that require modifications, the team may modify this installment and return it to the instructor

- with the next project installment. If the corrections are complete, no penalty is assessed. If the modifications are incomplete, the 5% penalty will be assessed.
11. All project installments turned-in for grading must be in a three-ring binder with all graded project installments (and instructor feedback) in the binder. A grading form with the “header” information completed must be included. The most recent submission is to be placed on top of all the preceding installments. Failure to do so will make the project installment unacceptable. Copies of unacceptable project installments must also be included in the binder.
  12. Additional considerations include:
    - a. Only one submission per day is permissible.
    - b. Project installments and re-submissions are all graded on a first-come, first-serve basis.
    - c. Project installments submitted early will be graded as if submitted at the submission deadline. In this fashion, early turn-ins will not receive a “free” review. However, teams may conduct walkthroughs of project installments with the instructor as time permits.
  13. Details regarding the project installments will be provided in class. However, these installments will generally be as follows:
    - a. Project Installment 1 Events, event table, & pseudo code
    - b. Project Installment 2 Form layout & user interface.
    - c. Project Installment 3 Simulation development & testing.
    - d. Project Installment 4 Program code development & implementation (system and user documentation).
    - e. The completed simulation must be demonstrated for the instructor.
  14. All students must complete the project installments in a team.
  15. Peer evaluations on all team members will be required from all students. Students who fail to complete all required peer evaluations may receive a 5% penalty on their **course** grade. The instructor will notify the class when peer evaluations must be completed.

**Team Rules:** The following are the rules that will be enforced on all teamwork.

1. **All decisions and work are to be done as a team.**

Do not simply have each team member responsible for a project installment. Each team member needs to be involved in each installment. The degree of involvement may vary across installments, but all must contribute to each installment.

2. **All team members are responsible for the content of the installment.**

What is completed and submitted for grading is the responsibility of the entire team. If the installment is submitted for grading, each team member has implicitly agreed to its content.

3. **If a team member does not participate in the work of the installment (e.g., does not attend meetings or does not complete agreed upon work in an appropriate fashion or time period), use the peer evaluation form to reflect this lack of participation.**

No team member is to receive a “free ride” from the other team members.

4. **If your team experiences significant conflicts, attempt to resolve these as a group before speaking with the instructor. Document these attempts and then speak with the instructor.**

One purpose of requiring work to be done in student teams is for students to gain experience in successfully dealing with these conflicts before encountering them “on the job.” Involving the instructor is a last resort, but must be done prior to completing the peer evaluation forms.

### **Important Dates**

**Final Examination:** Thursday, December 16, 2004 7:30AM to 9:30AM  
**The final examination is comprehensive.**

**Fall Recess:** Monday 11/22/04 to Friday 11/26/04.

### **Tentative** Course Schedule

<b>Theme 1 Data &amp; Computer Systems</b>	
Week 1 8/23-8/27	Class Introduction Chapter 1 Computer Systems
Week 2 8/30-9/3	Finish Chapter 1 Chapter 2 Number Systems
Week 3 9/7-9/10	Chapter 3 Data Formats Chapter 4 Representing Integer Data
Week 4 9/13-9/17	Finish Chapter 4 Chapter 5 Floating Point Numbers
<b>Theme 2 Computer Architecture &amp; Hardware</b>	
Week 5 9/20-9/24	Finish Chapter 5 Chapter 6 The Little Man Computer CPU Simulation Project Introduction
Week 6 9/27-10/1	Chapter 7 The CPU and Memory CPU Simulation Project Installment 1 Due
Week 7 10/4-10/8	Chapter 8 The CPU and Memory: Design Implementation, Enhancements
Week 8 10/11-10/15	Chapter 9 Input/Output Chapter 10 Computer Peripherals
Week 9 10/18-10/22	Chapter 11 Modern Computer Systems, Clusters, and Networks CPU Simulation Project Installment 2 Due Examination 1
<b>Theme 3 Operating Systems</b>	
Week 10 10/25-10/29	Chapter 13 Operating Systems: Overview
Week 11 11/1-11/5	Chapter 14 The User View of Operating Systems
Week 12 11/8-11/12	Chapter 15 The Internal Operating System CPU Simulation Project Installment 3 Due
Week 13 11/15-11/19	Chapter 8 section 8.2 Paging Chapter 15 section 15.6 Virtual Storage
<b>Fall Recess 11/22-11/26</b>	
Week 14 11/29-12/3	Chapter 16 File Management CPU Simulation Project Installment 4 Due
Week 15 12/6-12/10	Chapter 17 Programming Tools Supplementary Chapter 3 Communication Channel Technology Chapter 15 section 15.8 Network Operating System Services