Information Systems and Operations Management
Bryan School of Business and Economics
University of North Carolina at Greensboro

ISM 608: Networks and Telecommunications
Fall 2008

Instructor: Dr. A. F. Salam
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Phone: (336)-334-4991
Email: amsalam@uncg.edu (preferred)

Note: Please always send emails with Subject Starting with ISM 608
This will help me organize and respond to your problems quicker.

Office Hours: Wednesdays 4:30:00-6:00 pm
and By Appointment

Course Website: http://blackboard.uncg.edu

Required Text

Title: Computer Networks: A Systems Approach
Author: Larry L. Peterson and Bruce Davie
Edition: 4th
Year: 2007
ISBN: 0-12-370548-7 (Hard Bound)
ISBN: 0-12-374013-4 (Paperback)
Publisher: Morgan Kaufmann

Note: Additional Handouts will be distributed to the students in time. We will also
use this Textbook in ISM 609.

References:

1) Internetworking with TCP/IP: Client-Server Programming and Applications
   Author: Douglas Comer and David Stevens
   Year: 2001
   Publisher: Prentice Hall
2) Business Data Communications
   Author: William Stallings and Richard Van Slyke
   Year: 1998
   Publisher: Prentice Hall
3) Internet Engineering Task Force (IETF): http://www.ietf.org
4) World Wide Consortium (W3C): http://www.w3c.org
Introduction and Course Objectives:
This course deals with the basic and advanced concepts in business data communications that relate to the different forms of electronic communications involving computers and telecommunications technologies used by business organizations. The purpose of this course is to develop a comprehensive understanding of the Information and Communications Architecture of a modern business enterprise. The rapid change in this field requires a good understanding of fundamental concepts which can then be applied to understand emerging technologies and their impact on business organizations. The course is tailored around the TCP/IP Architecture and related set of technologies. The topics to be covered but are not limited to: Brief overview of Computer Architecture and Operating Systems Concepts, Data Transmission, Local Area Networks, Local Internets, Enterprise Internets, Wide Area Networks, and Telecommunications.

Upon successful completion of the course, you will be able to define, apply and evaluate the following technologies:

1) Data Transmission Technologies
2) Local Area Network Technologies
3) Wide Area Network Technologies
4) TCP/IP Architecture and Protocol Suite
5) Wireless Networks

Student Requirements and Responsibilities

This course will cover a significant amount of materials related to networking and communications technologies. Based on my past experience, I can state that for most of you (about 95% or more) this course will introduce numerous new concepts that are dense and are difficult to understand. I urge that you to set aside at least 6 to 8 hours of study time for each class meeting.

I expect you to come to class prepared. If you study the assigned class materials ahead of time then that gives you a chance to find out what you have understood and which concepts are difficult for you to grasp. This will allow you to ask questions in class for further clarification. This definitely makes your life easier in terms of understanding the lecture materials and also in terms of performing well in the exams and assignments. This will also make the course materials more interesting.

Try not to fall behind as each topic builds upon the previous topic and they are all interrelated similar to a puzzle. We have to understand each piece and its relationship with the other pieces to put the network puzzle together. Hence, this course demands a lot from each student. Each student is expected to come to class on time and stay the entire class period.
Please take notes in class so that you can review them at home to clarify the concepts discussed in class. If you are unable to follow the lecture and the discussion, you will eventually lose interest in the course as it becomes more and more difficult for you. You have to become an active learner to do well in this course.

**Relationship to other ISOM Courses:** It is the philosophy of the ISOM Department to help the student to develop the appropriate background and critical skills needed to function effectively in a global, technology-driven business environment. Knowledge gained in network and telecommunications technologies will help the student understand the other courses offered in the program. It will also help the student succeed in professional life. With the advent of the Internet and related applications, a good understanding of networking and telecommunications technologies has become an imperative for everyone working in the IT industry.

**Instructional Methods:** The course is delivered through a mixture of readings, lectures, in-class exercises, and assignments. Most in-class delivery will consist of the presentation and explanation of the concepts and the consideration of examples. Students are strongly encouraged to participate in class discussions.

**Exams and Policy for Make Up Exams:** The course will include a Mid Term Exam and a Final Exam. Attendance at examinations is mandatory -- no make-up examination is given for any reason. If a student must miss an examination, and if that student has a written, verifiable, legitimate (health related issues) excuse for the absence, then the student must contact the instructor prior to the Exam Date and provide necessary written evidence for the absence (evidence for health related problems may be presented later in consultation with the instructor). The instructor reserves sole discretion in this matter of providing the opportunity for a make up Exam. This opportunity is available only once during the semester.

**Attendance Policy:** Each student is responsible for all of the information (including announcements and handouts) presented in class. Traditionally, poor performance in this class has been closely related to poor attendance. Any person missing the first two classes without providing prior notification to the instructor will be administratively dropped from the course. Any student missing more than three classes during the semester can expect to have his/her final grade lowered by as much as one letter grade. No work-related excuses will be accepted.

**Oral and Written Communication Content:** This course concentrates on the detailed understanding and discussion of networking and telecommunications technologies. There will be significant attention given to oral and written communications. Students are expected to come to class prepared to ask questions and to (attempt to) answer
questions posed to them. **Students are expected to communicate with the instructor primarily via email when necessary.**

**Technology Applications** Technological advances in computing are addressed throughout the course.

**Ethical Perspectives:** This course will address ethical perspectives in the context of the set of networking and computing technologies as they relate to a business environment.

**Global Perspectives:** This course will address global perspectives only in the context of technology, its impact and management.

**Demographic Diversity Perspectives:** This course will not specifically address the issues of demographic diversity.

**Political, Social, Legal, Regulatory, and Environmental Perspectives:** This course will not specifically address the perspectives of Political, Social, Legal, Regulatory, and Environmental issues except those that are relevant to the use of networking and telecommunications technologies.

**Honor Code Policies:** University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, and/or plagiarism. Students will NOT make, borrow, or “share” copies of their project assignments or files with other students. Plagiarism is defined as presenting as one’s own work that work which is, in whole or in part, the work of another person or persons without giving proper credit to the appropriate source (this includes any published material available on the Internet). This includes submitting work done by another as one’s own work. Helping one another to understand concepts and issues is allowed, but copying violates UNCG Honor Code Policy. No credit will be received for work that falls under plagiarism, and other penalties may be imposed. Please refer to the UNCG Honor Code Policies.

**Inclement Weather:** Rarely UNCG closes for inclement weather. Local radio and television stations should have closing information by 6:30 a.m. Students may also call 334-5000 for any messages related to weather closings. Do NOT call the ISOM Department.

**Posting Grades:** Grades for courses offered in the ISOM Department are not posted and are not supplied over the telephone. If you wish "advance" information regarding a final grade, you should supply your instructor with a stamped, self-addressed envelop.
**Grading:** Grades for the course are based on examinations, assignments, and research paper. The final grade for the course will be determined as follows:

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<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>15</td>
<td>15%</td>
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<tr>
<td>Mid Term Exam</td>
<td>35</td>
<td>35%</td>
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<tr>
<td>Final Examination</td>
<td>35</td>
<td>35%</td>
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<tr>
<td>Term Paper: Individual</td>
<td>15</td>
<td>15%</td>
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The relationship between total points and letter grades is as follows:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>95 &lt;= X &lt;= 100</td>
<td>A</td>
</tr>
<tr>
<td>90 &lt;= X &lt; 95</td>
<td>A-</td>
</tr>
<tr>
<td>87 &lt;= X &lt; 90</td>
<td>B+</td>
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<tr>
<td>83 &lt;= X &lt; 87</td>
<td>B</td>
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<td>80 &lt;= X &lt; 83</td>
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<td>60 &lt;= X &lt; 70</td>
<td>D</td>
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<tr>
<td>0 &lt;= X &lt; 60</td>
<td>F</td>
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Addendum to the ISM 608 Syllabus Fall 2008

Tentative Course Schedule
(Subject to change depending upon class pace)

Week of August 25, 2008

Introduction
Chapter 1: Sections 1.1,1.2,1.3,1.4

Week of September 1, 2008
Computer Architecture (Handout on Memory)
Chapter 1: Sections 1.1,1.2,1.3,1.4 (Continued from previous week)

Chapter 2: Sections 2.1, 2.6, 2.8 and 2.9

Week of September 8, 2008
Chapter 2: Sections 2.1, 2.6, 2.8 and 2.9
Chapter 3: Section 3.1 (Exclude 3.1.3) , 3.2 (Exclude 3.2.2 and 3.2.3), 3.4

Week of September 15, 2008
Chapter 4: Section 4.1 and 4.3

Midterm Exam – Chapters 1, 2 and 3 and any handouts and class discussions
In-Class Exam consisting of True/False and Multiple Choice Questions

Week of September 22, 2008
Chapter 4: Section 4.1 and 4.3 (Continued from previous week)

Week of September 29, 2008

Chapter 5: Sections 5.2 and Handouts
Chapter 9: Section 9.1 Domain Name Systems (DNS)
Chapter 9: Sections 9.2.1 and 9.2.2

Week of October 6, 2008

Final Exam: Chapters 4 and 5 and Chapter 9 and any handouts and class discussion materials

Individual Term Paper Due in Class