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

ISM 321: Telecommunications Management  
Spring 2006  

Instructor: Dr. A. F. Salam  
Office: 438, Bryan  
Phone: (336)-334-4991  
Email: amsalam@uncg.edu (preferred)  

Note: Please always send emails with Subject Starting with ISM 321  

Office Hours:  
M: 5:00-6:00 pm  
W: 5:00 pm - 6:00pm  
and By Appointment  

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

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Required Text  

Computer Networking  
A Top Down Approach Featuring the Internet  
By James F. Kurose and Keith W. Ross  

Note: Additional Handouts will be distributed to the students in time  

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Introduction  

Catalog Description: Telecommunications technology and the use of that technology in business. Coverage of the voice, data and video communications and LANs and WANs. Emphasis on the delivery and management of telecommunications services.  

Course Objectives:  
This course deals with basic concepts in business data communications that relate to all forms of electronic communications involving computers and telecommunications technologies used by business organizations. The purpose of this course is to provide a fundamental understanding of the underlying technological and management issues related to data and telecommunications in modern business enterprises. 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, students will acquire a basic understanding of:

1) Computer Architecture  
2) Operating Systems Principles  
3) Data Transmission and Related Technologies  
4) TCP/IP Architecture  
5) Local Area Networks  
6) Wide Area Networks  
7) Local and Enterprise Internets  
8) Telecommunications Services

A Note to the Students:
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 2 to 3 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 course will cover a significant amount of material related to networking and communications technologies. 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 puzzle together. Hence, this course demands a lot from each student.

Each student is expected to come to class on time. If you are late, you disrupt me and the class and you are unable to follow the lecture and the discussion. You eventually lose interest in the course as it becomes more and more difficult for you. Hence, be present in the class on time. **No admittance to class 10 minutes past the start of classes. Please read the attendance policy as well.**

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 such as Database Systems, Client-Server Application Development, Ecommerce Application Development etc. 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 concepts and the consideration of examples. Occasionally, in-class quizzes may be held.

**Tests and Quizzes:** The course will include two in-class examinations, a final examination, and several in-class quizzes. Quizzes normally take 5 - 10 minutes to complete and are given at the start of class. Attendance at quizzes and examinations is mandatory -- **no make-up examinations or quizzes are given for any reason** (except for verifiable medical circumstances with prior notification).

**Attendance Policy:** Each student is responsible for all of the information (including announcements) presented in class and those made available through the blackboard ([http://blackboard.uncg.edu](http://blackboard.uncg.edu)) and emails. Traditionally, poor performance in this class has been closely related to poor attendance. Your work in the ISOM program is designed to prepare you to function as a professional -- professionals show up for scheduled meetings prepared and on time. **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 is allowed, but copying is cheating. This practice violates the UNCG Honor Code and defeats the purpose of this course. No credit will be received for shared work, 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, quizzes, assignments, and attendance (and the instructor's subjective evaluation). The final grade for the course will be determined as follows:
Note: Details about the Assignments and Term Paper will be given in time.

<table>
<thead>
<tr>
<th>Assignments (Group)</th>
<th>15 points (15%)</th>
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<tbody>
<tr>
<td>Term Paper (Individual)</td>
<td>10 points (10%)</td>
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<tr>
<td>Exams (2 @ 20 points each)</td>
<td>40 points (40%)</td>
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<tr>
<td>Final Examination</td>
<td>20 points (20%)</td>
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<tr>
<td>Quizzes (5)</td>
<td>15 points (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>94 &lt;= X &lt;= 100</td>
<td>A</td>
</tr>
<tr>
<td>90 &lt;= X &lt; 94</td>
<td>A-</td>
</tr>
<tr>
<td>87 &lt;= X &lt; 90</td>
<td>B+</td>
</tr>
<tr>
<td>83 &lt;= X &lt; 87</td>
<td>B</td>
</tr>
<tr>
<td>80 &lt;= X &lt; 83</td>
<td>B-</td>
</tr>
<tr>
<td>77 &lt;= X &lt; 80</td>
<td>C+</td>
</tr>
<tr>
<td>70 &lt;= X &lt; 77</td>
<td>C</td>
</tr>
<tr>
<td>60 &lt;= X &lt; 70</td>
<td>D</td>
</tr>
<tr>
<td>0 &lt;= X &lt; 60</td>
<td>F</td>
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**ISM 321: Telecommunications Management**  
Addendum to the Syllabus  
**Spring 2006**  
Instructor: Dr. A. F. Salam  
Tentative Schedule*  

* Subject to change depending upon class pace. Any changes will be announced in advance.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topics and Assignments</th>
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<tbody>
<tr>
<td>Jan 9</td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>TCP/IP Architecture Overview and Relation to Operating Systems And Computer Architecture</td>
</tr>
<tr>
<td>Jan 16</td>
<td>Monday (Jan 16) No Class</td>
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<td></td>
<td>Computer Architecture (Wed)</td>
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<tr>
<td>Jan 23</td>
<td>Computer Architecture Operating Systems Principles</td>
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<tr>
<td>Jan 30</td>
<td>Computer Architecture (including Memory Handout) Operating Systems Principles</td>
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<tr>
<td>Feb 6</td>
<td>Chapter 5 : Link Layer and Local Area Networks <strong>Term Paper Topic and Guidelines Handed Out (Individual)</strong> See Blackboard</td>
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<tr>
<td>Feb 13</td>
<td>Chapter 5 : Link Layer and Local Area Networks <strong>Assignment I - Local Area Network Design Handed Out (Group)</strong></td>
</tr>
</tbody>
</table>
| Feb 20  | Chapter 5: Link Layer and Local Area Networks **Exam I (Wed)**  
Will include everything (meaning handouts etc. + Class discussions etc.+ slides etc.) upto Chapter 5 and Part of Chapter 1 |
| Feb 27  | Chapter 6: Wireless LAN **Assignment I – Due (Wed in Class)** |
| Mar 6   | Spring Break- NO CLASSES |
Mar 13  Chapter 6: Wireless LAN
Assignment II- IP Address Space Design  Handed Out (Group)

Note: Last Day to Drop Without Academic Penalty March 15, 2006

Mar 20  Chapter 4: Internet Protocol (IP)
Assignment II – Due (Wed in Class)

Mar 27  Chapter 4: Internet Protocol (IP)

Apr 3  Chapter 3: Transmission Control Protocol (TCP)
Exam II (Wed)
Will include everything (meaning handouts etc. + Class discussions etc.+ slides etc. ) + Chapters 6 and 4

Apr 10  Chapter 3: Transmission Control Protocol (TCP)

Apr 17  Chapter 2: Application Layer
Term Paper Due (Wed in Class)

Apr 24  Socket Programming
Multithreaded Servers and Applications

May 1  Last Day of Classes for ISM 321

May 8  Final Exam ISM 321  12 Noon to 3 pm
Will include everything (meaning handouts etc. + Class discussions etc.+ slides etc. ) + Chapters 3 and 2