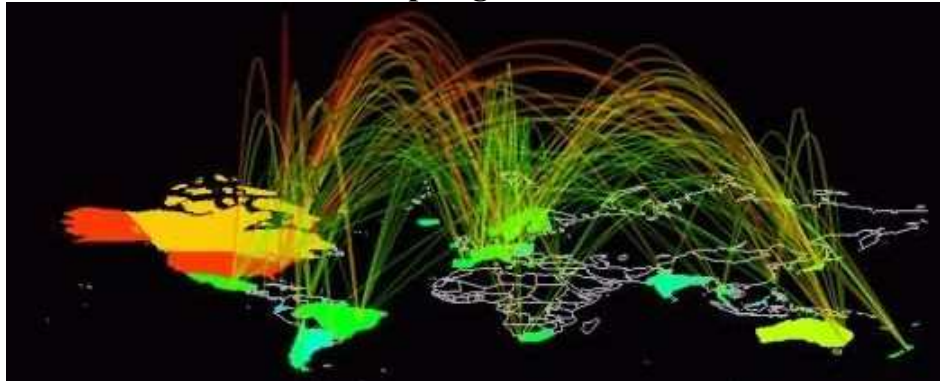




MGSC 494: Business Telecommunications Spring 2007





Course Web Page: <http://mgscweb.moore.sc.edu/kunev/>

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Class Meetings: Monday and Wednesday, 12:30 pm – 1:45 pm, Room 584

Office Hours: Mondays and Wednesdays, 10:30am – 11:30am and as needed (I'm here if you need me).

Course Overview & Objectives

Overview:

Every node added to the Internet compounds its complexity and dramatically expands its connectivity and impact. From 1990 the Internet has grown from a few thousand to over 100 million host nodes and entered over 150 countries! This has propelled the Internet, World Wide Web, and other "information superhighway" technologies into the popular press and into popular culture. But more importantly, we are beginning to see the impact on fundamental business paradigms. Behind this highly visible, seemingly monolithic, gargantuan network, is a slew of diverse telecommunications technologies. Today, it is almost inconceivable to imagine a large contemporary business organization that does not deal with telecommunications, both technologies and infrastructure. These technologies have exploded into use over the past decade and are becoming fundamental to the basis of competition. Further, partially as a result of the [Telecommunications Act of 1996](#), traditional boundaries separating information providers, telephone services, cable providers, and other firms in the telecommunications industry are becoming increasingly blurry, and the myriad of technological options available to businesses and consumers is becoming increasingly complex. The power of telecommunications becomes apparent when you, as a consumer, can manage your financial transactions through a

modem at home, make airline, car rental, and hotel reservations through a single contact point, or electronically debit your bank account during your grocery check out. The notion of computing is becoming increasingly convergent with communication as we move toward digitalization. With the massive amounts of information being transferred within companies, across companies, across industries and across geographic boundaries, it is imperative that we begin to understand the implications of these flows and the technologies involved.

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Objectives:

Telecommunications as an area of study has a unique set of concepts, jargon, and terminology that differs greatly from that of traditional computing technologies. In many ways it can be viewed as a foreign language which requires continuous practice before a level of comfort can be achieved. In attempting to achieve this level of comfort, the following should be kept in mind:

- While some telecom principles are relatively stable, the implementations and technologies associated with the field are undergoing rapid changes.
- This makes it difficult, if not impossible, to master this large and complex field, which incorporates theories from systems, engineering, and business with hundreds of diverse products and service implementations.

This first course in telecom will expose you to the fundamentals of communications, principal telecom technologies, business telecom applications, basic network design concepts and telecom business issues. In so doing, the course will be like a roller coaster ride, starting with bits and bytes and moving from electrical engineering concepts to systems, protocols, cost and policy issues, and future trends. The majority of the course will deal with fundamental concepts, jargon, and technologies associated with telecom. Toward the end, we will focus on a broad discussion of industrial, organizational, and managerial issues related to telecom.

After successfully completing the course you will have a broad understanding of the following fundamental communications concepts:

- Signals and Coding
- Media
- Standards and Protocols
- Network Hardware (Modems, Adapters, Multiplexing, etc.)
- Network Topologies (LANs, Media Access Protocols, etc.)
- High Speed Networks
- Internet Protocols
- Reference Models for Telecommunications


In addition, you will also have a broad overview of business and policy issues pertaining to telecom, including industry structure and regulation.


Expectations:

You will be expected to integrate various material (from class lectures, textbook, readings, and project) into a coherent "big picture." To this end, this course will encourage you to think, integrate, argue logically, and apply the concepts and knowledge to business situations.

Course Materials


 **Required Text:** *Business Data Communications and Networking* (9th edition), FitzGerald and Dennis, ISBN: 0-471-77116-3

 **Articles:** *(If there are any, they will be handed out in class)*

 **Handouts:** (If needed, will be provided in class)

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Course Evaluation & Grading

 **Grades:** Your final grade will be calculated as follows:

Graded Students Activities	
Final Exam	30 %
Midterm	20 %
Participation and discussion	10 %
Homework Assignments and Possible Quizzes	20 %
Group Project	20 %

Note that extra credit will be available as discussed in class by Mr. Kunev – [List of Acronyms](#).

Grading Policy

Letter grades will not be assigned to individual components of the class requirements. Only points (numerical scores) will be assigned. These numerical scores will be added at the end of the course, and the exact cutoff points for final grades will depend on the point distribution. However, the following scale is a rough guide:

Points percentage	Letter grade
> 90	A
80 – 85, 85.1 – 89.9	B, B+
70 – 75, 75.1 – 79.9	C, C+
60 – 65, 65.1 – 69.9	D, D+
< 60	F

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Exams

There will be one **midterm** and one **final exam** which will include objective questions in true/false, multiple choice and short answer/essay, and quantitative problem formats. These exams will require you to know the material discussed in class lectures as well as the material in the assigned readings. While the objective questions will require that you have done your reading and studied your class notes, the focus of the test will generally be to assess the extent to which you can integrate and apply the knowledge acquired. **The final exam will not be comprehensive.**

Class participation

Preparation and participation in class are key requisites for this course. A large portion of your class participation grade will be determined by your attendance and contribution in class case discussion. For a good participation grade, you should do things like:

1. apply conceptual material to cases,
2. do some outside reading and apply it in the discussion,
3. integrate comments from classmates,
4. logically contradict a classmate's analysis,

5. recollecting something said previously in the discussion that is important to the current discussion,
6. integrate material from several places into a case discussion,
7. draw parallels (or contrasts) from previous classes or cases,
8. briefly link a relevant experience you have had, or
9. generally demonstrate that you have not only read the class or case materials but also given it some careful thought.

Moreover, if you say something "wrong" or lose your train of thought, it will not count against you.

In addition to your participation, there are homework assignments. There will be questions to address at the end of each chapter's case study linked in the schedule table. Due dates will be noted in the table when the assignment is made.

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Group Project Assignment

The field of telecommunications is dynamic – propelled by rapidly changing technology. Organizations cope with telecommunications to compete more effectively, increase efficiency, enter new markets, etc. However, to effectively use new technology to improve the business, the astute manager must be familiar with changing technology. Once you begin working, either on an internship project or on the job, you may (and probably will) be asked by a executive to prepare a technical and business assessment of a new or recently emerged technology or topic that your supervisor has heard about or read about. You are to prepare such a high-level technical assessment report. The purpose of the projects is to provide the opportunity for you to research, understand, organize, and present a synopsis of a current topic or technology in communications and networking using what is studied in the class as a basis. Please remember that this is an objective, detailed presentation of a technology. It is **not** your position to persuade readers/viewers that the technology is fabulous or will work for everyone all the time. In order to fulfill this purpose, include all aspects of the technology. As such, the focus should be on both "how does this technology work" and "what can this technology do for a business." Your reports will be prepared in web (html) format and we will link each of your individual technology assessment pages to an overall Telecommunications Knowledge Base so that other students can use your assessments in their efforts to understand the wide array of emerging information technologies. You will also make a short presentation to the class on the technology you assessed during the latter part of the course.

Examples of some subjects that you might investigate are:

- Evaluate an emerging network technology (e.g. WiMax, optical networking, web services, grid computing)
- Evaluate an emerging network application (e.g. social networking, Voice Over IP, intelligent agents, on-demand services)
- Outsourcing and changes in work life due to advances in telecommunications
- Satellite communications and networking in a global setting

The web site should be concise, well organized and should include these topics:

1. **Introduction of the information technology** (A high level business and technical description that is oriented toward a senior manager – what is it, why is it important?) (Approx. value = 10%)
2. **Technical Analysis** (Detailed technical description along with advancements and barriers that exist) (Approx. value = 25%)
3. **Business Analysis of the Technology** (Assess business potential, impact on business, future growth prospects) (Approx. value = 10%)
4. **SWOT Analysis** (Table or figure outlining Strengths, Weaknesses, Opportunities, and Threats – see [SWOT document](#)) (Approx. value = 17.5%)
5. **Best estimates of cost** (What is the cost of this and associated technologies if a firm wanted to use it?) (Approx. value = 5%)
6. **Implementation issues** (Outline any possible problems, training required, pre-requisite technologies and/or processes, etc): (Approx. value = 10%)
7. **Best Stock Investment** (What is the best investment opportunity for someone wanting to buy stock in a firm that does business in that area?) (Approx. value = 7.5%)
8. **References** Include the sources of your data as well as several useful references (list Hyperlinks) (Approx. value =

5%)

This is a web page report and is different from a traditional text report. You have more creative liberty in the design and layout of your Technical Assessment Page than you do with a plain paper text page. Web pages allow you to add graphics, photos, video, and audio files besides just text. You can add colored fonts, colored backgrounds, hyperlinks to supporting websites, to increase not only the readability of your work but increase the transfer of information and access to information that your readers may desire. You have the freedom to enhance the richness of your site with "relevant" images and hyperlinks, however, you must prepare the Technical Briefing report so that it specifically responds to each of the questions above (Use all eight points as headings). This consistency of format will allow your classmates to easily review your page and your reported technology. As stated, in addition to linking your personal web pages, you are to link your page to our SharePoint site.

You will probably have to rely heavily on comparisons of vendor information you gather from the net. Also, check out our '[Useful Links Page](#)' for IS news and reference resources, vendor links and consultants, etc. or our '[Links for Students](#)' page for more helpful resources on financial aid, job hunting, etc. You also have traditional library and CD-ROM resources to fall back on! If you have never built a web page, here is a [web page tutorial](#) using MS Word.

I have placed approximate weightings for each topic so you have some guidance of the effort to be devoted to each question. This exercise, will be graded on a number of criteria including: the depth of research demonstrated, clarity of presentation, overall usefulness of the report to someone wishing to understand the new technology and its possible applications. While fancy design and images can enhance your presentation, the **major focus of this assignment is on your response to each the 8 assessment points**. Grading will reflect this focus. **In addition, you will be required to present me with a two-page executive summary and a draft of your presentation on the due date.**


You will be asked to present your Technical Briefing to the class and will be notified of the date and time later in the semester. Each team will have about 15 minutes (I will notify about the exact time allocation later in the course) to make their presentation with a few moments for questions afterwards. Any member(s) of your team may make the presentation. The classroom is equipped with a computer and PowerPoint software in order for you to make a professional presentation.


You are to send me (dimitar_kunev@moore.sc.edu) an e-mail message containing a link to your project home page no later than


Assignment Due Date: Monday April 23, 2007

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Courses Policies

 **Communication:** *Open Door Policy:* I very much enjoy interacting with students after class and maintain an "open door" policy. If you are having any problems with this course, please come by and talk to me! As the *customer* of this university, I will make it my duty to give due consideration to any difficulty you may be having with this course. I do rely on [E-mail](#) as a primary means for transaction-based communication and the web for public information dissemination.

 **Attendance:** Attendance will be taken at each session. Excessive absences or tardy arrivals will lead to a reduction in course grade. Disruptions in class due to frequent coming and going out of the classroom will also be accordingly penalized. The class is a forum for learning. So it is to your benefit to attend regularly and try to assimilate the material. Additionally, if you miss more than one day of class, your class participation grade will be seriously affected. Any absences for a valid reason must be brought to my attention as early as possible, preferably before the class you have to miss.

 **Prerequisites:** While the class will cover a number of technical issues, the general focus of the class will be managerial and will not directly require a computer background. It is assumed that students have basic literacy on PC use.

● **Late Assignments or Missed Examinations:** If you are unable to take a test or you fail to do an assignment, a zero will be assigned to your grade. Needless to say, this will have an adverse effect on your grade for the course. Late submissions (any time after the deadline) will not be accepted. Only under exceptional circumstances will consideration be given, if you see me ASAP.

● **Quality of Presentations and Assignments:** Unprofessional or untidy assignments (hand written, torn, messy diagrams etc.) may detract from the overall quality of your work for grading purposes. In other words, no handwritten assignments or difficult-to-read fonts!!!

● **Academic Integrity:** Standards of academic integrity will be enforced in this course. Abiding by the following golden rule should keep you safe here:

"I shall not cheat nor will I tolerate it in others!"

If you are unsure in any respect about this policy, it is always better to err on the side of caution. You will be best served by bringing any such concerns to my attention as soon as possible and *before* submitting any assignments, tests, etc.



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Last Revised: 1/16/07