

**BUSINESS DATA COMMUNICATIONS (MGT 4053)**

**Fall 2012**[[1]](#footnote-1)

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| Instructor: German Retana  Class Time: MW 12:05 pm – 1:25 pm  Class Room: College of Business 203 | Office Hours: MW 2:00 pm – 3:00 pm & by appointment  Office: College of Business 461F  Email: [german.retana@scheller.gatech.edu](mailto:german.retana@scheller.gatech.edu)  Phone: 404-894-4376  Twitter: [@germanretana](http://twitter.com/germanretana)  Skype: gretana |

# COURSE OVERVIEW

The world today is observing how more and more devices communicate with each other over a vast variety of networks. The devices include servers, storage appliances, desktops, laptops, netbooks, tablets, smart phones, among others. They exchange data through both physical and wireless networks that may span anywhere between a few feet (e.g. Bluetooth) and across the globe (e.g. WANs). The networks also differ in terms of data rates, supported protocols, topology, security, and reliability, to name a few characteristics. Since firms must unavoidably integrate some form of data communications as part of their business processes, managers must know how to choose and adequately make the most of the network infrastructures that best fit their business models. This may be instrumental in sustaining a competitive advantage in today’s fast-paced and technology-reliant industries. This course prepares you to do this.

This course provides an introduction to data communications and computer networks. It is targeted for students who have little or no background on these subjects. Since the technologies involved evolve rapidly, the course will focus on the underlying principles of data communications and their business implications, rather than on specific hardware devices or software applications that may quickly turn obsolete. By doing this you will be prepared to make better educated decisions regarding both current and future technologies. The topics covered will include (i) fundamental concepts of networks like application architectures, physical and wireless media, HTTP, TCP/IP, and routing, (ii) network technologies such as LANs, WLANs, cellular technologies, and CDNs, (iii) network security topics including business continuity, intrusion, and social engineering, and finally (iv) network management issues related to network design, costs, and the adoption of novel public cloud computing infrastructure services. We will complement the technical materials covered in the textbook with business case studies, additional readings from other sources, and talks by industry guest speakers. The course will have enough technical content to allow you to interact confidently with a networking engineer, yet emphasis will be given to the managerial implications of data communications.

Welcome to your course!

# COURSE OBJECTIVES

Upon completion of our course, you should be able to:

* Understand how each layer of network communications functions, and how they work together to facilitate data communications.
* Evaluate networking architectures in light of firm structure and strategy. Use knowledge of technology and business fields to make better IT investment decisions.
* Use knowledge of the operation of technical infrastructures, combined with theories from economics and strategy, to evaluate the impact of new network technologies and trends on existing market structures and to evaluate new business opportunities.
* Identify and evaluate risks compromising network security.

# COURSE FORMAT

The above objectives will be achieved through a combination of in-class lectures by the instructor, in-class case discussions between the instructor and the students, interaction with guest speakers, and both group and individual take-home assignments. Class sessions will be very interactive. Students are expected to contribute to class discussion with questions, comments, new perspectives, and their personal experience. Individual contributions to class discussions are an important part of the learning process. You are expected to justify assertions, and to deal effectively with challenges to your position and competing points of view.

We will cover the following modules in depth:

* Module 1: Introduction
* Module 2: Fundamental Concepts
* Module 3: Network Technologies
* Module 4: Network Security
* Module 5: Network Management

# REQUIRED COURSE MATERIALS

* Fitzgerald & Dennis (2011) Business Data Communications and Networking, 11th Edition. John Wiley & Sons, Inc. ISBN 978-1118086834.[[2]](#footnote-2)
* Course packet with case studies and additional readings available from Harvard Business School Publishing through the following link: <http://cb.hbsp.harvard.edu/cb/access/13853862>
* A set of supplement materials (e.g., lecture slides) available from the T-Square site for the course. Please do not redistribute any material you downloaded from the T-Square site without written permissions of their respective copyright owners.

# GRADING

* Homework Assignments 20%  
  *2 individual or couple assignments x 10% each*
* Case Study Reports 21%  
  *3 group assignments x 7% each*
* First Exam 13%  
  *Individual exam for modules 1 & 2*
* Second Exam 16%  
  *Individual exam for modules 3 & 4*
* Final Project 15%  
  *Group project (in lieu of final exam)*
* Participation & In-class quizzes 15%

## HOMEWORK ASSIGNMENTS

Each homework assignment will cover relevant materials discussed in class as well as materials from the readings assigned for the class sessions. Each assignment will be designed so that it significantly aids you in your preparation for the exams; you will note that they are due on the sessions just before each of the exams, so working on the homework is part of your preparation to take the exam. Teams of two students can do the assignment together or you may work on the assignment individually. If you work as a team, please submit only one copy with the names of both team members on the front page and make sure the document looks as a joint project (rather than two separate documents put together). Sharing or discussing solutions to the assigned questions with anyone other than your team member will be considered cheating. You may pair with different team members for each homework assignment. There will be two assignments over the course of the semester, each worth 10% of your final grade.

The homework assignments will be distributed via T-Square and submissions will only be accepted via T-Square too. All assignments are due at the beginning of class on the due date, which will be the class sessions right before an exam and for which **Homework** is marked in bold as due on the tentative class schedule. Assignments uploaded to T-Square 5 minutes after class time has begun (after 12:10 pm on due date), handed in personally, delivered into my mailbox, or emailed to me after class has begun, will be considered late. Any assignment turned in late but within 4 hours of the due date/time (before 4:05 pm on due date) will receive half credit (up to 5%). After that, no assignments will be received unless previous arrangements have been made with me before the due date/time. All assignments must be typed. Work “professionally”; spelling, grammar, and punctuation are important, and points may be deducted for errors.

## CASE STUDY REPORTS

The cases form an important part of the class and will significantly influence your final grade. You will work on your reports in groups of at most 5 and not less than 4 students. I will not allow you to form any groups of 6 (or more) because I believe that free-riding would be inevitable in such cases. It is already difficult to distribute work evenly among 5 team members. Free-riding is particularly unacceptable considering the strong weight that the case reports have on your final grades. I am also unwilling to let you work individually. IT architecture decisions, and in particular network architecture decisions, are never taken by a single person in a firm. The case reports are designed as group assignments because it is in your own best interest to practice having technical debates with peers, even if it is remotely using Skype, Google Hangouts, other real-time communication software – and this would actually be using a networking technology! One report submission is required for each group. Please include the group members’ names on the front page of the submission and make sure the document looks as a joint project (rather than several documents put together). Please form your groups by Monday, August 27, and notify me via email ([german.retana@scheller.gatech.edu](mailto:german.retana@scheller.gatech.edu)) who the members of your teams are; please also CC your team members to make sure the entire team is on the same page. Your notifications will help me make sure there are not any students left without a group. Your first case (Gmail) will be due a week after this on Monday, September 5. The sooner you find a group, the sooner you can start working on it! You can work with different groups for each case report.

You are required to submit reports for any 3 of the 4 cases for which **Case Report** is marked in bold as due on the tentative class schedule (Gmail, Android, Akamai, and iPremier). Each report is worth 7% of your final grade. If you submit reports for all 4 cases, the one with the lowest grade will be dropped and not taken into account for your final grade. Case questions will be distributed via T-Square. Case reports must be a maximum of 4 single spaced pages, with additional material in appendices if necessary. Appendices are not included in the page limit count. Bullet point format is adequate and preferred; you do not have to write essays. The report should answer the case questions, but you can point out other interesting issues not covered by the questions. In general, the structure of your report (i.e., subtitles) should follow the assigned questions.

The case report submissions will only be accepted via T-Square. All reports are due at the beginning of class on the due date. Reports uploaded to T-Square 5 minutes after class time has begun (after 12:10 pm on due date), handed in personally, delivered into my mailbox, or emailed to me after class has begun, will be considered late. Any report turned in late but within 4 hours of the due date/time (before 4:05 pm) will receive half credit (up to 3.5%). After that no case reports will be received unless previous arrangements have been made with me before the due date/time. All assignments must be typed. Work “professionally”; spelling, grammar, and punctuation are important, and points may be deducted for errors.

I think the following approach will work very well for writing the case reports:

1. Individually read the case and the questions given to you, followed by a short meeting (maybe 5 minutes after class at least a week before due date) to decide on the information to be collected from the web and other sources
2. Meet for one hour to discuss the questions, information gathered and the answers.
3. Prepare the write-up and circulate via email
4. Review and understand your team’s deliverable fully. What you learn from working on the report will be evaluated for sure in further examinations after due date (i.e., quizzes and exams).

Each of the questions assignment will have a specified weight towards your case report’s final grade. I will grade your answers to each of the questions on 3 dimensions:

1. The quality of researchyou have done to find support for your viewpoints – anyone can have an opinion, you need to back it up with research on the web, the library sites and other sources.
2. The logical developmentof your arguments – are your arguments carefully and logically developed or do they appear ad-hoc and not well thought through?
3. Presentation– how well you organize your reports. Do I have to read every word and decipher the key points hidden somewhere, or does your presentation facilitate my understanding of the arguments made?

Also, please keep in mind that I have read the case study too. Thus, I expect that your reports include your own analyses and opinions rather than the same text that was provided to you in the assignment. Finally, there is no problem is using any source of information you find. In fact, leveraging on additional resources (e.g., online articles, Wikipedia) is encouraged. Nonetheless, you must make a clear distinction between what are your own ideas and what has been collected from other sources. Using such resources without proper acknowledgements and citations (i.e., plagiarism) will be severely penalized.

## EXAMS

Exams will be closed book and will cover all assigned required readings and materials discussed in class. There will be two exams given in-class during the semester with 80 minutes in length. The second exam will not be cumulative, though an understanding of contents covered in the first exam may be required to best answer its questions. You are strongly encouraged to write clearly; if your writing is illegible, I will be forced to deduct points for the portions I cannot read, even if they are correct.

Exams’ dates as they appear in the tentative schedule will not change regardless of our progress in covering the course content. Exams missed due to an excused absence must be made up within one week of returning to class for full credit or no credit will be given. Excused absences include, but are not limited to, death in the immediate family, serious personal or immediate family illness resulting in hospitalization, and jury duty. The instructor reserves the right to determine excused absences. Exams missed due to an unexcused absence may not be made up. Documentation supporting the excused absence may be required at the time the exam is made up.

## FINAL PROJECT

The purpose of this project is to simulate a short research project such as those you may encounter during an internship or a job. You will be studying and evaluating a specific data-communications technology in depth in a short period of time. Rather than being a one-time deliverable at the end of the course, I expect the project to be a learning experience through which I will be providing guidance as you make progress. This is why there are intermediate deliverables, and the final write-up is due on the day we would have our final exam – there is no final exam.

Topics for your project can be drawn from a wide range of networking technologies, services, applications or issues. The topic must have both technical and business aspects. You need to make sure that the topic is not too broad (e.g., the Internet) or too focused (e.g., TCP/IP protocol). Examples of potential topics for your projects are the following:

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| 1. Voice-over-IP (VoIP) 2. Tele-presence 3. 4G mobile networks 4. DevOps 5. Video streaming services 6. Migration to IPv6 7. Big Data & Business Analytics (e.g., NoSQL databases) | 1. Cloud infrastructure services (any of the following)    1. Online storage services    2. On-demand servers (private and/or public clouds)    3. Security & compliance of public clouds    4. Cloud management systems (brokers)    5. Configuration management services |

Again, these are just examples and I will be very happy to consider any alternative topics beyond these. If you are not sure if your topic fits the requirements, please feel free to contact me and tell me about it as soon as possible.

By doing this project, you should:

1. Exercise your knowledge of the basic principles underlying networking technologies learned in class.
2. Gain in-depth understanding of the networking technology you are interested in.
3. Become familiar with various information sources related to networking technologies.
4. Develop technical writing skills in order to better communicate your knowledge of networking technology with others.

The following are the project’s specific requirements:

**A. Wednesday, October 17 – Form Groups & Notify**

Before the start of our session on Wednesday, October 17, you must notify me via email (one email per group is fine, and please CC the other members) of the groups you have formed to work on your final projects. You will work in groups of at most 5 and not less than 4 students (for same reasons as for case studies). Your group for the final project may be different from that you are working with for the case studies. Your notifications will help me ensure no student is left without a group for her/his final deliverable. From this day onwards, you should start thinking on what your team will work on.

**B. Midnight, Monday, November 5 (or sooner)– Project Proposal**

The purpose of having you write the proposal is to make you start thinking about the project topic early and that I can provide you feedback before you dive too deep into some topic. By midnight of this day, November 5 (or earlier if you wish) you will submit to T-Square a 1 to 2 page document in which you answer the following questions:

1. What networking technology or service will you focus on?
2. What motivates you to choose this topic (for example, some interesting market phenomenon)? Why is this networking technology or service relevant for businesses?
3. What information do you think you might need and where do you plan to get it?
4. What do you plan to do and expect to get from this project?

The proposal is worth 10% of the project’s final grade.

**C. Saturday, December 1 at 9:00am (or sooner) – Project Update**

By the end of this week you are expected to have made significant advancements towards your final deliverable. If you haven’t, you might be in trouble. Before 9:00am on Saturday, December 1, please upload to T-Square a near-complete document with your final project document. You will be allowed to later update your work as many times as you want before the final due date (Monday, December 10). This write-up will not be graded. This deliverable has two goals:

1. Ensure you do not leave all the work towards the end of the semester when you may want to invest time in preparing for the final exams of other courses.
2. Allow me to provide you anticipated feedback before your final deliverable. At this point of your project I’m your teammate, not your evaluator. Thus, the more you show me by this deadline, the more I can help you!

I commit to provide you detailed feedback by Sunday, December 2 at 9am at the latest. Of course, if you deliver the update before the deadline, you will also get your detailed feedback sooner. If you deliver your work at any time before 9pm of Friday, November 30, I commit to provide you with feedback at most 36 hours after the time of your submission to T-Square. Nonetheless, I will not provide any feedback on documents submitted after Saturday at 9am.

**D. Monday, December 3 and Wednesday, December 5 – Presentation to Peers**

In prior versions of this course, students have developed excellent (and very cool) final projects that sadly their peers have not had a chance to learn from. This deliverable has the goal of allowing you to share your recently acquired knowledge on the network technology you chose with your peers. On these days you and your teammates will have the opportunity to present us what you have learned.

Although it may vary depending on the number of teams formed by you, it is very likely that you will be preparing 15-20min presentations followed up by 10-15min of discussion and conversation. Specific details will be offered as dates approach.

Your in-class presentations will be worth 40% of your final project grade. Your grade will depend on your ability to present your work in a clear and concise manner, and also the quality of your responses to your peers’ (and my) questions. Which of the 2 days your team presents will be assigned via lottery at the beginning of Monday, December 3’s session.

**E. Monday, December 10 at 2:50pm – Final Project Executive Brief**

You must upload the final version of your document to T-Square before December 10 at 2:50pm – this is the date and time we would have our final exam. Given that you proposed your topic almost 2 months ago, submitted a near-complete version of your document at least 9 days ago, gave a presentation to your peers the week before, and received feedback from all prior deliverables, there shouldn’t be much more work left towards this deadline.

Your final write-up should include an overview of technology and an analysis of the market/industry. The document should have between 8 and 10 single-spaced pages (12 pt. font), excluding cover-page but including tables, figures and references. It is meant to be an executive report, not a book. The page-limit is enforced in order to train you in presenting complex ideas in a concise manner.

Your write-up is expected to include, but is not limited to, the following components:

1. Description of the Technology or Service (20% of final project grade).
   1. You are expected to provide an overview of the technology/service (goals and purpose) and explain the functions of the technology in layman’s terms. The challenge is to provide a description of the components and the process underlying the technology without using jargons.
   2. Be sure to discuss what are the advantages and disadvantages of this technology compared to other existing ones? What are the costs and benefits of using this technology? What problems does it solve? What problems does it create? If possible, it would be great if you include some brief example with monetary figures.
2. Market Analysis (20% of final project grade)
   1. How is the market/industry defined? Who are the main players? What are their business and market positions (Are they small firms or large organizations? Is their stock publicly traded? What are their products and services? What are potential substitutes? Who are their customers? Who are their suppliers?
   2. How do they compete against each other? What are the critical drivers that make the market leaders successful? What are competitive barriers? What types of revenue streams characterize the players? What types of revenue streams characterize the industry as a whole?
3. Prediction of the future of your chosen topic (i.e. product/service) (10% of final project grade). What do you see as future trends of your chosen product/service?

Overall, always keep in mind this is an executive report that you could very well be handing over to your future employer or partner. Managers, and in particular those from areas other than IT, are much more interested in the business implications the technology or service than in the engineering details of it.

In sum, your final project grade consists of a proposal (10%), presentation to peers (40%), description of technology or service (20%), market analysis (20%), and prediction of future developments (10%).

## PARTICIPATION & IN-CLASS QUIZZES

In-class quizzes will be given periodically throughout the course of the semester. They will target material covered in the previous class, material that you were asked to prepare for class, or material covered during the class in which the quiz takes place. These are designed to help me to evaluate how well the class understands the material that we have recently covered. They will take place at any time during the class session. Quizzes will be graded on a 10-point scale. Students who take a quiz will automatically earn 6 out of 10 points (a bonus for your attendance!). The remaining 4 points will be based upon quiz performance.

The quizzes will take place in random dates, and the total number of quizzes will be between 10 and 15. Your grade for Participation and In-class Quizzes, which represents 15% of your final grade, will be computed as your average score across all the in-class quizzes that have taken place by the end of the course minus one. The quiz with your lowest grade (that may be a zero in case of an absence) will be dropped out of the calculation. For example, if we have 13 quizzes in total, but you did not come to class the day we had one of them, your awarded points for Participation and In-class Quizzes will be the average score of the 12 quizzes you did take.

In addition to the quizzes, which serve you to earn points, you may have participation points deducted by any of the following reasons:

1. An unexcused absence to a session with a guest speaker. 4% of your final grade will deducted for each absence. Attendance to these sessions will be registered through a sign-in sheet. Excused absences will be considered in the same way as they are considered for exams (see above).
2. Engaging in disruptive behavior in class. Disruptive behavior includes things such as talking in class, getting up to walk around, ringing cell phones, sleeping, or any other behavior that would disturb your classmates. 2% of your final grade will be deducted for each occurrence of any of these events.
3. Unless instructed, the usage of any electronic device such as your laptop, cell phone, beeper, and any other such equipment during class sessions. 2% of your final grade will be deducted for each occurrence of any of these events.

For example, if through the quizzes you had earned 12% of the available 15% for Participation and In-class Quizzes, but you missed a guest speaker session without a valid excuse, you will only be awarded 8% for Participation and In-class Quizzes.

## FINAL GRADE

Your final grade will be converted to a letter grade according to the following table:

A 🡨 90% ≤ Final Grade

B 🡨 80% ≤ Final Grade < 90%

C 🡨 70% ≤ Final Grade < 80%

D 🡨 60% ≤ Final Grade < 70%

F 🡨 0% ≤ Final Grade < 60%

Students taking this course on a pass/fail basis will be assigned an “S” for their performance only if they would have received the grade of “C” or better (i.e., above or equal to 70%) if they had enrolled in the course on a regular letter-grade basis.

Posted Letter grades are FINAL**.** Unfortunately, there will always be a significant number of students that end up missing a higher letter grade by 1% or 2%. No matter where I draw the line, this will occur. Therefore, I am not able to make arbitrary adjustments once all the scores are in without undermining the whole grading system.

# COURSE POLICIES

## THE GEORGIA TECH HONOR CODE

The Georgia Tech Honor code applies to all aspects of the course. Plagiarism will be reported to the Dean of Students office. Please pay attention to following statements, which are quotes or adoptions directly from Georgia Tech’s faculty guidelines (“checklist”) for syllabus.

*Plagiarizing is defined by Webster’s as “to steal and pass off (the ideas or words of another) as one's own use (another's production) without crediting the source.” If caught plagiarizing, you will be dealt with according to the GT Academic Honor Code.*

*“Unauthorized use of any previous semester course materials, such as tests, quizzes, homework, projects, and any other coursework, is prohibited in this course. Using these materials will be considered a direct violation of academic policy and will be dealt with according to the GT Academic Honor Code.”*

Thank you for respecting the Georgia Tech Honor code. Georgia Tech will further develop its reputation as a place for high standards and academic integrity. If you have any questions involving these or any other Academic Honor Code issues, please consult me or [www.honor.gatech.edu](http://www.honor.gatech.edu).

## COMMUNICATIONS / CHANGES TO SYLLABUS

The above procedures for grading and the class schedule that follows are subject to change. Any changes (with sufficient time for students to make necessary adjustment) will be posted on the shared class website on T-Square (<http://t-square.gatech.edu>). This website will be also used to distribute assignments, grades, lecture notes, announcements. It is your responsibility to check the website *before* each class session.

Communication will also be based on the Georgia Tech student email (that ends in @gatech.edu or in @scheller.gatech.edu) that is assigned to you. We pull that address automatically from the school database. It is your responsibility to have the Georgia Tech email account active and to receive and regularly read messages written to that address. If you have a personal address (like Gmail or Yahoo), forward your Georgia Tech email to that address and make sure it is not filtered as spam.

# TENTATIVE SCHEDULE

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| **DATE** | **#** | | **TITLE** | **ASSIGNED READINGS** | **DUE** |
|  | | | | | |
| **MODULE 1** |  | | **INTRODUCTION** |  |  |
| Mon Aug-20 | 1 | | Course Introduction | Syllabus | - |
| Wed Aug-22 | 2 | | Introduction to Data Communications | *Both ed:* Ch 1 | - |
|  | | | | | |
| **MODULE 2** |  | | **FUNDAMENTAL CONCEPTS** |  |  |
| Mon Aug-27 | 3 | | Application Layer: Application Architectures | *11th ed:* Ch2, Sections 2.1-2.2  *10th ed*: Ch 2, p. 38-49 | Notify 1st Case Study groups |
| Wed Aug-29 | 4 | | Application Layer: Peer-to-Peer (P2P) Networking | *Case/Article*: P2P File Sharing & the Market for Digital Information Goods | - |
| Mon Sep-03 | - | | Enjoy Labor Day | - | - |
| Wed Sep-05 | 5 | | Application Layer: WWW & Email | *11th ed*: Ch 2, Sections 2.3-2.6  *10th ed: Ch 2, p. 49-66*  *Case*: Google Inc.: Launching Gmail | **Case Report**  **Gmail** |
| Mon Sep-10 | 6 | | Physical Layer: Network Circuits & Media | *11th ed*: Ch 3, Sections 3.1-3.3  *10th ed: Ch 3, p. 75-95* | - |
| Wed Sep-12 | 7 | | Physical Layer:  Transmitting Digital Data | *11th ed*: Ch 3, Sections 3.4-3.5  *10th ed: Ch 3, p. 95-104* | - |
| Mon Sep-17 | 8 | | Physical Layer:  Transmitting Analog Data  Data Link Layer: MAC & Transmission efficiency | *11th ed*: Ch 3, Sections 3.6 + skim Ch 4  *10th ed: Ch 3, p. 104-111 + skim Ch 4* | - |
| Wed Sep-19 | 9 | | Network &Transport Layers: TCP/IP & Addressing | *11th ed*: Ch 5, Sections 5.1-5.4  *10th ed: Ch 5, p. 146-164* | - |
| Mon Sep-24 | 10 | | Network &Transport Layers:  Routing | *11th ed*: Ch 5, Sections 5.5-5.7  *10th ed: Ch 5, p. 146-164p. 164-183* | - |
| Wed Sep-26 | 11 | | Review of Modules 1 & 2 | All prior. Bring computer if you want. | **Homework 1** |
| Mon Oct-01 | 12 | | First Exam | - | **First Exam** |
| **DATE** | **#** | | **TITLE** | **ASSIGNED READINGS** | **DUE** |
|  | | | | | |
| **MODULE 3** | |  | **NETWORK TECHNOLOGIES** |  |  |
| Wed Oct-03 | | 13 | Wired & Wireless Local Area Networks (LAN & WLANS) | *11th ed*: Ch 6; *10th ed: Ch 6 & 7* | - |
| Mon Oct-08 | | 14 | Special:  Introduction to Cellular Technologies | *Article*: Welcome to a Wireless World | - |
| Wed Oct-10 | | 15 | Special:  Smart Phones Economics | *Case*: Google's Android: Will It Shake Up the Wireless Industry in 2009 & Beyond? | **Case Report**  **Android** |
| Mon Oct-15 | | - | Enjoy Fall Break! | - | - |
| Wed Oct-17 | | 16 | Backbone Networks (BN) | *11th ed*: Ch 7  *10th ed: Ch 8* | Notify Final Project Groups |
| Mon Oct-22 | | 17 | Wide Area Networks (WAN) | *11th ed*: Ch 8  *10th ed: Ch 9* | - |
| Wed Oct-24 | | 18 | The Internet & CDNs | *11th ed*: Ch 9  *10th ed: Ch 10*  *Case*: Akamai Technologies | **Case Report**  **Akamai** |
|  | | | | | |
| **MODULE 4** | |  | **NETWORK SECURITY** |  |  |
| Mon Oct-29 | | 19 | Network Security: Business Continuity | *11th ed*:Ch 10, Sections 10.1-10.3  *10th ed: Ch 11, p. 366-389* | - |
| Wed Oct-31 | | 20 | Network Security: Intrusion | *11th ed*:Ch 10, Sections 10.4-10.6  *10th ed: Ch 11, p. 389-421* | - |
| Mon Nov-05 | | 21 | Network Security  Speaker: Taylor Banks, owner, KnowThreat | <http://www.taylorbanks.com/> | **Guest Talk** &  **Final Project Proposal** |
| Wed Nov-07 | | 22 | Special: Cloud Infrastructures | NIST’s Definition of Cloud Computing  *Article*: Above the clouds: A Berkeley view of Cloud Computing | - |
| Mon Nov-12 | | 23 | Special: Web 2.0 & Security Policy | *Article*: How are Business Using Web 2.0  *Case*: iPremier(A): Denial of Service Attack | **Case Report**  **iPremier** |
| Wed Nov-14 | | 24 | Review of Modules 3 & 4 | All prior. Bring computer if you want. | **Homework 2** |
| Mon Nov-19 | | 25 | Second Exam | - | **Second Exam** |

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| **DATE** | **#** | | **TITLE** | **ASSIGNED READINGS** | **DUE** |
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| **MODULE 5** | |  | **NETWORK MANAGEMENT** |  |  |
| Wed Nov-21 | | 26 | Cloud Infrastructure Services: Serving cloud to local SMBs  Speaker: Dan Timko, VP of Cloud Services, Bluewave Computing | *Article*: McKinsey on IT Architectures  <http://www.bluewave-computing.com/> | **Guest Talk** |
| Mon Nov-26 | | 27 | Network Design & Management | *11th ed*:Skim Ch 11-12  *10th ed: Skim Ch 12-13* | - |
| Wed Nov-28 | | 28 | Configuration Management & DevOps  Sepaker: John Willis, VP of Client Service and Enablement, enStratus | *11th ed*:Ch 12, Sections 12.3 & 12.6  *10th ed: Ch 13, p. 477-479, 490-496*  <http://www.enstratus.com/> | **Guest Talk** |
| Sat Dec-01 | | - | Final Project Updates  *Submit by 9:00am* | - | - |
| Mon Dec-03 | | 29 | Final Project Presentations and Feedback from Peers | - | Final Project Presentation |
| Wed Dec-05 | | 30 |
| Mon Dec-10 | | - | Final Project Executive Brief *Submit by 2:50pm* | - | Final Project Executive Brief |

1. Syllabus Revision Date: August 29, 2012. Added my Skype account, added some more info on guest speakers, and fixed couple of typos in dates of tentative schedule. [↑](#footnote-ref-1)
2. Alternatively, you may consider the older (and less expensive) 2009, 10th Edition (ISBN 978-0470055755). Nonetheless, the 10th edition includes some content and technologies we will not cover and may not include some of the activities (in-class demos or homework assignments) we will use. The course will be based on the 11th edition and you will be the only responsible of any material missing from or presented differently in the 10th edition. The tentative schedule includes 10th edition references in case you opt for it, but the 11th edition is the only official one for the course. [↑](#footnote-ref-2)