Reedley College

Spring 2009

01/12/09 – 05/22/09

## Course: **IS 30 Fundamentals of Networking** (51041)

## Class meets: MWF 1:30pm – 2:35 pm

Instructor: David L. Atencio, BA computer science/MBA

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Office Hours: TBD

Final Drop Date:10/16/09

Final Exam: 12/14/09

**Text Books and Study Material:**

Network+ Guide to Networking

1. **Course Description and Information:**

This course provides an introduction to computer networking, including network hardware and software. Additionally, this course provides an introduction into installation of networks, network design, and communications links

1. **Course Learning Objectives and Outcomes:**

**Objectives:**

* 1. Explain how networks are interconnected.
  2. Distinguish between media types and properties for differing topologies of networks.
  3. Understand how operating system software affects hardware choices.
  4. Identify the various nodes that can exist on a network.
  5. Compare, contrast, and install various network media.
  6. Compare various computer operating systems for both the client and the server and determine their appropriate use.
  7. Identify the functions of domains in a network operating system environment.
  8. Differentiate among the various server processor architectures.
  9. Determine hardware and software requirements for varying network topologies.
  10. Understand network server installation.
  11. Set up security policies, create user profiles, and modify registry entries.
  12. Manage servers, users, and resources with a server manager utility.
  13. Monitor network system performance.
  14. Identify and distinguish the abilities, rights, shares, and permissions of folders and files.
  15. Understand printer operations, including priority levels, print devices, and scheduling.

**Outcomes:**

1. Analyze a business’ data and computer usage and develop a networking proposal.
2. Make proper equipment recommendations for a small local area network.
3. Propose the appropriate software for a small local area network.
4. Install, configure, and maintain a small local area network for a business.
5. Determine the correct topology to implement in a network design.
6. Troubleshoot a networking communication problem.
7. **Attendance:** Attendance is required and the instructor reserves the right to take roll at any time during the duration of the class period. To achieve successful completion of the course, it is critical for the students taking this course to attend all classes. I will drop you if you have more than three consecutive unexcused, absences.
8. **Policies:** Campus code requires that shoes or sandals and appropriate attire be worn at all times on Eating, drinking, and smoking is not allowed in the classroom or computer labs. Cell phone must be turned off or in the silence mode while class is in session. A student will be subject to discipline if she or he:

* Prevents other students from pursuing their authorized curricular or co-curricular interests.
* Interferes with or disputes faculty and administrators who are fulfilling their professional responsibilities.
* Prevents classified employees from fulfilling their prescribed duties.
* Deliberately endangers the safety of persons or the security of college property.
* Violates Reedley College computers and networks usage policy.

1. **Behavioral Standards:** Your classmates and I would greatly appreciate that students in the class take care of any personal needs (i.e., using the rest room, getting a drink, sharpening a pencil) before class begins. Please turn off you cell phones when entering the class. You may not use your phone as a calculator. I would appreciate that you not bring guests to class. I start class on time, please don’t be late. If you are late, it is your responsibility to ensure you are counted for attendance after class. You may not surf the internet during lectures.
2. **Academic Dishonesty:** Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly obtained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

* **Plagiarism:** Plagiarism is the adoption or reproduction of the ideas or words or statements of another person without due acknowledgment. This can range from borrowing without [attribution](http://en.wikipedia.org/wiki/Attribution) a particularly apt phrase, to paraphrasing someone else's original idea without citation, to wholesale [contract cheating](http://en.wikipedia.org/wiki/Contract_cheating). When plagiarizing, students will often turn to the [Internet](http://en.wikipedia.org/wiki/Internet), due the ease of [copying and pasting](http://en.wikipedia.org/wiki/Copying_and_pasting) from websites. Other more old fashioned forms of plagiarism such as [paper mills](http://en.wikipedia.org/wiki/Essay_mill) and passing off obscure articles or chapters of books of others as original work also still occur. Plagiarized papers are often riddled with gross inconsistencies such as referencing non-existent sections of the essay, changes in spelling and grammar customs, or the argument changing in mid-paragraph.
* **Cheating:** Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers in an attempt to gain an unearned academic advantage. Cheating can take the form of [crib notes](http://en.wikipedia.org/wiki/Cheat_sheet), looking over someone's shoulder during an exam, or any forbidden sharing of information between students regarding an exam or exercise. Also, the storing of information in graphing calculators, pagers, cell phones, and other electronic devices has cropped up since the information revolution began. Incidents of cheating and plagiarism may result in a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course at the discretion of the instructor and depending upon the severity and frequency of the incidents.

1. **Accommodations for students with disabilities**: If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act please contact me as soon as possible.
2. **Learning Methods:**
   1. Lectures – used to provide bring all students to a level playing field of learning
   2. Required reading
   3. Class projects and Blackboard assignments (lab work)
   4. Textbook assignments (lab work)
3. **Reading and Lab Assignments:**  Assigned chapters MUST be read prior to attending class. Students are required to complete class/lab assignments in class. You may collaborate with fellow students on lab assignments. Late lab assignments will not be accepted.
4. **Outcomes assessment:**

*Network+ Guide to Networks:* Quizzes (2 @ 20 points each) 40 points

*Network+ Guide to Networks* Labs (15 @ 10 points each) 150 points

Midterm 50 Points

Participation 100 points

Final Exam/demonstration 100 points

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Total 440 points

Grading scale:

90-100% = A 80-89% = B 70-79% = C 60-69% = D <60% = F

1. **Final Drop Date:** The final drop date for this class is: 09/04/09 (to avoid a “W”) and 10/16/09 (to avoid a letter grade)
2. **Examinations and assignments:** All examinations must be completed individually. Students may make use of the help feature of any application provided in the classroom computers. Students may use their books and notes for all examinations. I will keep open the previous week, current week and one future week at all times for assignments and exams. Once a week is closed out it will be too late to make up.
3. **Schedule:**

| **Week** | **Notes** | **Reading Assignments** | **Homework/Lab Assignments** |
| --- | --- | --- | --- |
| ***Week 1***  ***Week of 08/17/09*** |  | Chapter 1  An Introduction to Networking | **Mon: Class orientation, Intro to Blackboard, syllabus review, district policies, companion website.**  **Wed & Fri: Introduction to networking.** |
| ***Week 2***  ***Week of 08/24/09*** |  | Chapter 2  Networking standards and the OSI model | **Mon: Finish Ch1, start CH2**  **Wed: Ch2 Cont**  **Fri: Lab 1 - Project 2-3, section 1&2** |
| ***Week 3***  ***Week of 08/31/09*** |  | Chapter 3  Transmission Basics and Networking Media | **Mon: Ch3**  **Wed: Ch3 cont, start Lab 2**  **Fri: Lab 2. Project 3-1** |
| ***Week 4***  ***Week of 09/07/09*** | ***No Class Monday***  ***Labor day*** | Chapter 3  Transmission Basics and Networking Media | **Mon: Holiday**  **Wed: Lab 3 - Project 3-1 Cont…Make up Ethernet cables**  **Fri: Lab 4 - Test cables.** |
| ***Week 5***  ***Week of 09/14/09*** |  | Chapter 4  TCP/IP Protocols | **Mon: Ch4**  **Wed: Ch4**  **Fri: Quiz 1 (Chapters 1-3)** |
| ***Week 6***  ***Week of 09/21/09*** |  | Chapter 5  Topologies and Ethernet Standards | **Mon: Ch5**  **Wed: Ch5**  **Fri: Lab 5 Project 4-4 & 4-5** |
| ***Week 7***  ***Week of 09/28/09*** |  | Chapter 5 Continued | **Mon: Lab 6 (Project 5-2)**  **Wed: Lab 7 (Project 5-3)**  **Fri: Quiz 2 (Chapters 4-5)** |
| ***Week 8***  ***Week of 10/05/09*** |  | Chapter 6  Network Hardware | **Mon: Ch6**  **Wed: Ch6**  **Fri: Lab 8 (Project 6-4)** |
| ***Week 9***  ***Week of 10/12/09*** | ***Last day to drop: Friday Oct 16*** | Chapter 6 (cont)  Network Hardware | **Mon: Ch6**  **Wed: Ch6, Midterm**  **Fri: Midterm** |
| ***Week 10***  ***Week of 10/19/09*** |  | Chapter 7  WAN’s and Remote Connectivity | **Mon: Ch7**  **Wed: Ch7**  **Fri: Lab 9 Sharing files & Remote Desktop** |
| ***Week 11***  ***Week of 10/26/09*** | ***No class Friday*** | Chapter 8  Wireless Networking | **Mon: Ch8**  **Wed: Ch8** |
| ***Week 12***  ***Week of 11/02/09*** |  | Chapter 8  Wireless Networking | **Mon: Lab 11 (Project 8-1)**  **Wed: Lab 12 (Project 8-2)**  **Fri: Lab 13 (Project 8-3)** |
| ***Week 13***  ***Week of 11/09/09*** | ***No Class Wednesday***  ***Veterans Day*** | Chapter 9  Network Operating Systems | **Mon: Characteristics of Network OS**  **Wed: Holiday**  **Fri: Lab 14 Windows server 2008** |
| ***Week 14***  ***Week of 11/16/09*** | ***No Class Friday*** | Chapter 9 cont  Network Operating Systems | **Mon: Lab 14 Windows server 2008**  **Wed: Lab 14 Windows server 2008**  **Fri: No Class** |
| ***Week 15***  ***Week of 11/23/09*** | ***No Class Friday***  ***Thanksgiving*** | Chapter 9 cont  Network Operating Systems | **Mon: Lab 15 Linux**  **Wed: Lab 15 Linux**  **Fri: No Class** |
| ***Week 16***  ***Week of 11/30/09*** |  | Chapter 12  Network Security | **Mon: Security Audits, Security Risks**  **Wed: Security policy, NOS security**  **Fri: Encryption** |
| ***Week 17***  ***Week of 12/07/09*** |  | Chapter 12 (Cont)  Network Security | **Mon: Viruses**  **Wed: Malware, Spyware, etc…**  **Fri: Final review** |
| ***Week 18***  ***Week of 12/14/09*** | **FINALS WEEK** |  | **Final**  **Monday December 14 @1-2:50** |