

Peru State College
CMIS 310 – Network Design and Implementation
Syllabus – Fall – 2009

Instructor: Brad Griffin
Office: Room 306, TJ Majors Building
Office Hours: Thursday 9:00 AM to 11:00 AM and Noon to 3:30PM Other hours by appointment
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Course Meets: Friday 9:00 AM to 10:30 AM / Online

Required Textbook: Network+ Guide to Networks by Tamara Dean 5th edition ISBN 1-423-90245-9

Required Software: LabSim for Network+, 2nd edition ISBN 1-4188-3585-4

Word Processor for text assignments

RJ -45 crimpers/cutters. More info will be provided – budget approximately \$20 for this (Do not go out and purchase on your own yet!!!!)

Other software as provided by your instructor

Course Description & Objectives:

This course covers the fundamental principles of data communication and connectivity. Topics include network and protocol architectures, communications media and hardware, networking analysis, and management of network systems. Other areas of study include wireless and mobile networks. Network security is addressed.

Prerequisites: A willingness to learn and CMIS101

Upon completion of this course you should be able to:

1. Have conceptual knowledge of the OSI reference model
2. Be familiar with various mediums used for network connections
3. Understand direct connections, virtual private networks, and wide area networks.
4. Understand basic network security and planning a secure network.
5. Plan, install, and maintain local area networks.
6. Troubleshoot networking issues, scenarios, and networking problems.
5. Have knowledge of general security issues in networking

On the first day of class, I will discuss how these objectives fit into the School and College mission and goal statements attached.

Expectations & Instructional Approach:

This class is being taught in both online sections and on-campus sections. Both sections will use Blackboard to turn in all material for grading and will utilize the same grading scale. The course will consist of readings from not only the textbook, but current publications and the instructor's own notes. In addition, the section that meets on-campus will receive some lecture. Simulation software will be used to get acquainted with new concepts and ideas. Moderated discussion board postings will be used to allow thoughtful and scholarly discourse regarding various concepts.

Weekly quizzes will be used to reinforce reading and simulation. These will be approximately 25 multiple choice or short answer questions. One quick note, I will examine each quiz, especially if there are fill in the blank questions as Blackboard does not do a good job of grading them. Each week there will also be a short assignment that will require critical thinking and problem solving. Finally there will be several small small projects to reinforce skills and ideas learned throughout the course.

There will be an ever present Instructor's Corner on the discussion board where any class related questions can be asked. The advantage is that all your classmates learn from your astute questions. The exception is that any questions with private or confidential information should be sent via email. Do not be surprised if I send back,

“Please post on the discussion board” if I deem a question to be class related and not private. Examples of class discussion, “I need a memory aid for the OSI reference model.” Private, “I will not be in class because I have to be in court for assaulting a professor last semester.”

I expect my classroom both on-campus and online to be a place of free and welcome learning! Please treat all your classmates (and your instructor!) with respect.

Grading: Grading will be done by percentage. The typical 90, 85, 80, 75, 70, 60 grading scale will be utilized.

Each week will have a discussion board posting worth a maximum of 15 points. This totals 240 points.

The lab simulations and associated assignments are worth 10 points per week, or a total of 160 points. Because I wish you to experiment with the simulation software and explore, these points will be awarded for completing the assignment only. Do not worry about the percentages shown by the progress report! I WANT you to examine all the possibilities and make mistakes! These 160 points should be the easiest points you’ve ever earned!

There will be 3 larger projects throughout the course worth 50, 50, and 75 points for a total of 175 points.

Each chapter will have a small critical thinking assignment. Some of the point values will vary on these assignments.

I also will have approximately 50 points (of close to 1000) that I will call discretionary points. Always posting, courtesy, willingness to learn, all of these factors count towards earning those points.

One last note. Late assignments. These will not be accepted without prior approval or extremely unusual circumstances. If you are unable to complete an assignment, please speak with me as soon as possible! I am going to post my solutions to many of these problems as soon as the assignment due date is up, so after that time no assignments will be accepted.

Tentative Schedule:

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|------|----|------------|---|
| Week | 1 | Chapter 1 | Introduction to Networking |
| Week | 2 | Chapter 2 | Networking Standards and our friend the OSI Model |
| Week | 3 | Chapter 3 | Transmission Basics (not automatic vs. stick) and media |
| Week | 4 | Chapter 4 | TCP Protocols! |
| Week | 5 | Chapter 5 | Topologies and Standards |
| Week | 6 | Chapter 6 | HARDWARE! |
| Week | 7 | Chapter 7 | WANS, Internet, and remote connectivity |
| Week | 8 | Chapter 8 | WIRELESS |
| Week | 9 | Chapter 9 | Network Operating Systems |
| Week | 10 | Chapter 9 | Unix and networking! |
| Week | 11 | Chapter 10 | In Depth TCP/IP |
| Week | 12 | Chapter 11 | Voice/Video of IP |
| Week | 13 | Chapter 12 | Shhhhhh, its secure! |
| Week | 14 | Chapter 13 | Troubleshooting! |
| Week | 15 | Chapter 14 | Integrity and Availability! |
| Week | 16 | Chapter 14 | Network Management |

Disclaimer: The above schedule could change due to external factors. The truth is, I expect it to change with current events and student needs! Also, late homework and tests will be received at the instructor’s own discretion. The instructor reserves the right to not accept late homework or exams.

Cheating/Plagiarism:

Unless directed otherwise, students are expected to do their own work on assignments and exams. Academic dishonesty will result in actions in accordance with the college's disciplinary policy and may result in loss of credit for the assignment.

In order to promote academic integrity, the college subscribes to an electronic service to review papers for the appropriate citations and originality. Key elements of submitted papers are stored electronically in a limited access database and thus become a permanent part of the material to which future submissions are compared. Continued enrollment in a course signifies your permission for this use of your written work. Should you not wish to agree to this procedure, you may drop the course during the add/drop period before any works are completed and submitted.

Students with special needs are encouraged to make them known to the instructor during the first week of class. The instructor reserves the right to modify any aspect of the course syllabus or content. Any modifications will be communicated to students in advance.