CS 6261-01: System and Network Admin I

Fall 2008

Course meeting times: Monday / Wednesday 7:00 pm – 8:15 pm
Credit hours: 3.0

Instructor: Lewis Baumstark ("Dr. B")
Email: lewisb@westga.edu
Web page: http://www.westga.edu/~lewisb
Office: TLC 2-215
Phone: (678) 839-6663
Office hours: Available on webpage.

Catalog Description

This course explores principles and practices in systems and network administration, with a focus on small-scale computing environments. The course will focus on practical aspects of designing, implementing, and managing a local area network (LAN) consisting of servers, client workstations, network devices, and associated software services and tools running on multiple operating system platforms. Fundamental theoretical concepts in operating systems and networks will be discussed in the context of system and network administration. A major component of this course includes a term project consisting of the setup and configuration of a complete LAN environment.

Learning Objectives

1. Explain the purpose and function of the basic components of an operating system, and how such components affect system management and performance.
2. Explain the purpose and function of the fundamental components of a local area network (LAN).
3. Explain the concept of layers in the OSI model and the TCP/IP stack and how individual layers relate to components of a network environment.
4. Demonstrate an ability to install and configure at least two different operating systems running on multiple systems connected to a local area TCP/IP network.
5. Demonstrate the ability to effectively utilize command-line as well as graphical tools in system and network management tasks (to include administration and basic troubleshooting).
6. Explain the role of and demonstrate the ability to setup and configure DNS, DHCP, and NTP services for a LAN.
7. Understand the role of directory services in managing and supporting a networked environment, and demonstrate an ability to setup and configure a server providing directory services to client workstations (to include administration of users, groups, and workstation configuration settings).
8. Demonstrate the ability to setup and configure file and print sharing services for a LAN.
9. Demonstrate the ability to install and manage software packages on at least two different operating systems.
10. Identify basic security vulnerabilities in a networked environment and demonstrate an ability

apply basic security settings to an OS to mitigate those risks.
11. Provide Internet connectivity to a local area network using a gateway server and network address translation (NAT).
12. Discuss current trends and issues in systems and network administration.

Optional Texts

All of the following texts are available on-line through the UWG Library. Note that they are only accessible from on-campus.

Jonathan Hassell, *Learning Windows Server 2003: 2nd edition*, O'Reilly and Associates, 2006. Available here.

Roberta Bragg and Craig Hunt, *Windows Server 2003 Network Administration*, O'Reilly and Associates, 2005. Available here.

Paul Albitz and Cricket Lui: *DNS and BIND, 5th Edition*, O'Reilly and Associates, 2006. Available here.

Attendance

Much of this course is discussion-based and/or hands-on, so attendance is mandatory. You get two absences for free; I would recommend using them only if absolutely necessary. Every unexcused absence thereafter will incur a 10% penalty on your **final** grade. (Translation: miss three times and the **highest** grade you can receive for the course is a 90, assuming everything else is perfect. Miss four times and the highest you can receive is an 80, etc.)

Which begs the question, "what is an excused absence?" Typically, an excused absence is one in which you give me prior notice and a good reason. University-sponsored functions also count as "excused." Sometimes emergencies happen. In that case, tell me as soon as possible afterwards, but bring me more than just a verbal excuse (e.g., doctor's note would be acceptable). *An excused absence does not relieve you of the burden of completing assignments or taking tests.*

Academic Honesty

My Academic Dishonesty Policy is available on the course website. You are expected to read and understand it, as it is to be considered part of this syllabus.

Grading

You grade for the course will be determined as follows:

Midterm Exam & Final Exam (10 pts each)	20%
Assignments	15%
Projects	65%

	Total	100%

Tests may only be made up for excused absences. Late homework and project submissions will not be accepted.

Final grades will be determined via the standard 10-point scale:

> A: 90-100
> B: 80-89.9999
> C: 70-79.9999
> D: 60-69.9999
> F: below 60

Important dates

September 1, 2008: Labor Day (no classes)
September 24, 2008 (tentative): <u>Midterm Exam</u> (in-class)
October 9 & 10, 2008: Spring Break (no classes)
November 26-28, 2008: Thanksgiving Recess (no classes)
December 10, 2008: <u>Final Exam</u> (8 pm – 10 pm)

Miscellaneous

Unless I state otherwise, when submitting homework assignments, please submit a single ZIP file containing all the files you generated for the assignment. (<u>Fair warning</u>: files compressed with RAR or LZW will NOT be accepted!)

Please turn off all cell phones and pagers before class. If your phone rings, I will mock you mercilessly in front of your peers. If my phone rings, you may mock me mercilessly in front of your peers.

E-mail

From time to time I may send you e-mail with important information. You are responsible for providing me with a valid e-mail address (through your Moodle account) and for checking it regularly (at least once a day).

Note that, per university policy, you are also responsible for checking your campus portal (http://myuwg.westga.edu) email on a regular basis. This is in addition to whatever email address you provide to Moodle.

If you send me e-mail, please include the following two pieces of information:

1. *Your full name*. I can not be expected to know who xb42.ub40@yahoo.com is.

2. *A useful subject line.* Please -- at the least! -- include "CS6261" in the subject line. Even better will be to include a short description of your problem. Good examples: "CS6261: question about Test 2", or "CS6261: can I schedule an appointment?" Bad example: "test", "help!", or, worst, nothing.

Disability Services

Any student sanctioned by the office of Disability Services must have a Student Disability Report and a Disabled Student Handbook available to share with the Faculty before any graded work is determined as to make appropriate arrangements as needed. For more information, please visit http://www.westga.edu/~dserve/menu.html.