

Brooklyn College
Department of Computer & Information Sciences

CISC 7350 [746X] Distributed System Administration

37½ hours plus conference and independent work; 3 credits

Installation, configuration, and maintenance of an operating system. Configuration of routers, networks, and subnetworks. Installation, configuration, and maintenance of network utilities such as email, web server, and other services. Use of network diagnostic tools. Identification and repair of network and configuration problems.

Syllabus

This course is structured as a series of units which include a lecture followed by the corresponding laboratory time. Each unit spans several weeks. Each unit will be 1/3 to ½ lecture with the remainder being lab time.

Unit 1 (weeks 1-2).

- Description of the boot process and disk partitions.
- Lab: installation of an operating system and configuration of basic tools (printer, user, and installation of packages).

Unit 2 (weeks 3-5).

- Discussion of virtualization including techniques and existing systems.
- Lab: installation of a second operating system and virtualization system. This will involve basic network setup as well as modification of the kernel.

Unit 3 (weeks 6-8).

- Discussion of network servers, their operation, installation, and monitoring.
- Lab: setup of a local network and servers such as mail relay.

Unit 4 (weeks 9-11).

- Discussion of network security and tools.
- Lab: using network security tools.

Unit 5 (weeks 12-14).

- Discussion of more network security.
- Lab: installation of IP security tools and a virtual private network.

Week 15 Final exam

Bibliography:

This course does not follow a text but here are some suggested reference texts.

"UNIX System Administration Handbook (3rd Edition)", by Evi Nemeth, Garth Snyder, Scott Seebass, Trent R. Hein, Prentice Hall (2000).

"Linux Administration Handbook (2nd Edition)", Evi Nemeth, Garth Snyder , Trent R. Hein, Prentice Hall (2006).

"Absolute FreeBSD, 2nd Edition: The Complete Guide to FreeBSD", Michael W. Lucas, No Starch Press (2007).

"FreeBSD Corporate Networker's Guide (With CD-ROM), Ted Mittelstaedt, Pearson Education.

"Postfix: The Definitive Guide", Kyle Dent, O'Reilly Media, Inc.(2003).

"Apache: The Definitive Guide, Third Edition", Ben Laurie, Peter Laurie, O'Reilly Media, Inc.(2002).