



CC310

Enterprise Network Technologies (Win/Linux)

Spring 2008

Credit Hours : 3+1

Instructor: **Dr. Fauzan Mirza**

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Office Hours: Mon-Fri 2pm – 3pm

Extension: AB4 ext. 13

Lab: Wed 12pm-2pm (Linux Lab)

Classes: Thu 8am-9am (CR-1, Exec. Block)

Fri 9am-11am (CR-1, Exec. Block)

Course Objective

This course aims to impart knowledge of the technologies being used to create the computing and networking infrastructure in an enterprise. This course would mainly deal with implementing several common scenarios using the Windows and Linux operating systems. Students would be given real life examples of enterprise network designs and would be taught the configuration of several components forming the efficient enterprise network.

After completion of the course, students are expected to have familiarity with administration aspects of both Windows and Linux and hands on experience of designing, configuring and managing a network at the enterprise level.

Main Topics to be Covered

- Operating Systems
 - History and evolution of Operating Systems
 - Differences between Home / Small / Medium / Large Networks
- Windows 2000/NT/XP Administration
 - Users and groups
 - Directory and filesystem structure
 - File security and access rights
 - Devices and drivers
 - System and user processes
 - Disk partitions
 - OS boot procedure
 - Security
- Linux Administration
 - Users and groups
 - Directory and filesystem structure
 - File storage and quotas
 - File security and access rights
 - Devices and drivers
 - System and user processes
 - Disk partitions
 - OS boot procedure
 - Security
- Customization tools
 - Shells and scripting
 - Advanced file and data processing

- Linux Configuration and Maintenance
 - Software compilation and installation
 - OS kernel configuration and compilation
 - System configuration files
 - User and group management
 - Process management
 - Security management
 - Network configuration
 - Network services management
- Inter-operability
 - Identity management (LDAP)
 - File sharing (NFS, Samba)
 - Printer sharing
 - Backup and recovery

Recommended Text Books

The course does not follow any particular text book, but the following books may be useful to supplement material covered in the classes and labs:

- Richard Petersen, *Fedora Core 7 & Red Hat Enterprise Linux: The Complete Reference*, 4th edition, McGraw-Hill Osborne, 2007.
- Tammy Fox, *Red Hat Enterprise Linux 5 Administration Unleashed*, Sams, 2007.

In addition, a great deal of information covering many aspects of this course are available on various web sites. Information about useful sites to supplement material being covered will be given during the course.

Grading / Mark Scheme

- 10/15-Minute Quizzes: 10%
- Assignments: 5%
- Term Project: 15%
- Mid-Term Exam: 30%
- Final Exam: 40%

Policy Matters

- Assignments will be issued which will be due one week from the issue date.
 - Quizzes may be conducted in class during the first 5-10 minutes, and late-comers will suffer.
 - Missed quizzes cannot be retaken under any circumstances.
 - Anyone found assisting or committing plagiarism in any assignment or quiz will have all their assignment and quiz marks cancelled.
 - Project reports due in week 12 and presentation given in weeks 13-15.
 - Exams during 8th week and 16th week.
 - At least 75% attendance needs to be maintained in order to be allowed to sit the Final Exam.
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