

## ITNW 2405 – Network Administration (4:3-2)

**Informal Description:** The world today is relies heavily on networks. This course introduces students to UNIX, and how to set up, modify and maintain a Linux based LAN and web server

### Textbooks/Reference/Materials

- Linux System Administration, Marcel Gagné. ISBN 0-201-71934-7 (also used in ITSC 1305)
- Access to <http://www.templejc.edu/dept/cis/CCollins/Collins.htm>
- floppy disks or other file storage (home computer, removable USB drive, etc.)

### Course Competencies

CIP Code: 11.1001 (System Administration/Administrator)

Course Title: Network Administration

Course Level: Intermediate

Course Description: Topics include network components, user accounts and groups, network file systems, file system security, and network printing.

Learning Outcomes: Describe the components of a local area network and their relationship; create and administer user accounts and groups; plan and set up network file systems; create effective file system security; and implement and administer network printing.

Suggested Prerequisite: Fundamentals of Networking

### COURSE CALENDAR

6 Week Semester	16 Week Semester	Notes	Lecture Topics	Labs
Week 1	Week 1		Syllabus/Orientation; Chapters 1-3	
	Week 2		Chapter 4	Lab 1 due
	Week 3		Chapter 5	Lab 2 due
Week 2	Week 4		Chapter 6	
	Week 5	Review	Chapter 7-8	Lab 3 due
	Week 6	Test 1	Chapter 9	Lab 4 due
Week 3	Week 7		Chapters 10-11; 20-21	Lab 5 due
	Week 8		Chapters 12-13	Lab 6 due
	Week 9	Review	Chapters 14-15	
Week 4	Week 10	Test 2	Chapters 16-17	
	Week 11		Chapters 18, 23-26	Lab 7 due
	Week 12		Chapter 19	Lab 8 due
Week 5	Week 13		Chapters 24-25	Lab 9 due
	Week 14	Review		
	Week 15	Test 3		
Week 6	Week 16	Final		Capstone Lab 10 due

See course website for current semester's calendar, and holidays

Notes:

## ITNW 2504, Continued

Early topics:

The BIG Picture, planting seeds, Lexicon: the language of networking

DOS Commands

Linux Commands

Goal of networking:

1. Access control
  - a. Who can
    - i. Read
    - ii. Write
    - iii. Execute
    - iv. Create
    - v. Modify
    - vi. Delete
    - vii. List files
  - b. Access given to"
    - i. Individual User(owner of file)
    - ii. Group of users
    - iii. Others
2. Resources Control
  - a. Files
  - b. Printers
  - c. Etc.
3. Timeline
  - a. Set up network
    - i. Topologies
      1. bus
      2. star
      3. ring
      4. hybrid
    - ii. Connectivity
      1. bridges
        - a. hubs, routers, switches
      2. gateway devices
    - iii. protocols
      1. IEEE
        - a. 802.3 Ethernet
          - i. 10/100 Mb
        - b. 802.11 b-g
          - i. 4-11-54 Mb
  - b. Set up server
  - c. Set up groups
  - d. Set up users
    - i. When can they use resources
    - ii. What can they see and use
    - iii. Where can they access network
    - iv. How much storage and bandwidth should be allocated
  - e. Maintenance
  - f. Security
  - g. Limitations