

Linux (3 – 0 - 3)
BCA, Third Year, Sixth Semester

Evaluation:

	Theory	Practical	Total
Sessional	30	20	50
Final	50	-	50
Total	80	20	100

Course Objectives:

1. To provide strong knowledge of the open source operating system.
2. To provide the knowledge of server program in operating system.

Course Contents:

- 1. Introduction** **2 hrs**
 - 1.1 Linux: History and Introduction
 - 1.2 Advantages of Linux over other operating system.
 - 1.3 FAT, NTFS, EXT
 - 1.4 Culture of free software
- 2. Basics of Linux** **5 hrs**
 - 2.1 Commands
 - 2.2 Shells csh, ksh, bash
 - 2.3 Text editors-vi, Pico
 - 2.4 File system of Linux
 - 2.5 Directories and their special purpose
- 3. Installation of Linux** **3 hrs**
 - 3.1 Partitioning
 - 3.2 Installation of Linux
 - 3.3 Troubleshooting of installation
- 4. System Administration** **6 hrs**
 - 4.1 Root login
 - 4.2 Super user
 - 4.3 Configuration of hardware with kudzu
 - 4.4 Checking system space
 - 4.5 Monitoring system performance
 - 4.6 Working with file system
 - 4.7 Configuring modules
- 5. User Management** **6 hrs**
 - 5.1 Creating user accounts
 - 5.2 Setting user defaults
 - 5.3 Providing support to users
 - 5.4 Modifying accounts
 - 5.5 Deleting user accounts
 - 5.6 Checking disk quotas



5.7 Sending mail to all users	
6. Security and System Handling	6 hrs
6.1 Understanding shell scripts	
6.2 System start up and shutdown	
6.3 Scheduling system tasks	
6.4 Backing up and restoring	
6.5 Password protection	
6.6 File security	
7. Setting up a Web Server	4 hrs
7.1 Introduction to web server	
7.2 Starting the Apache web server	
7.3 Configuring the Apache server	
7.4 Monitoring server activities	
8. Setting up DHCP and NIS	5 hrs
8.1 Introduction to DHCP	
8.2 Setting up DHCP server	
8.3 Setting up DHCP client	
8.4 Understand NIS	
9. Setting up a Database Server	5 hrs
9.1 Configuring database server	
9.2 Checking the status	
9.3 Working with database	
10. Setting up DNS Server	4 hrs
10.1 Introduction to DNS	
10.2 Setting up DNS and configuration	
10.3 Querying DNS	
11. ISP Simulation	2 hrs
Integration of Servers; DNS, Web, Email etc	

List of Practical:

1. Linux utilities
2. OS installation project work.
3. User management using terminal
4. Security level Access control list.
5. Network setting.
6. Server configuration of DHCP, DNS, database server
7. Demonstration of web/mail/ file server.

Text Book:

Christopher Negus: Red Hat Linux 8.0, Bible, WILEY

References:

1. Neil Jenkins and Stanschatt: *Understanding Local Area Networks, PHI*
2. Andrew S. Tanenbaum: *Computer Networks, PHI*

