Program : **Diploma in Computer Engineering**	
Course Code : **6139B**	Course Title: **Server Administration Lab**
Semester : **6**	Credits: **1.5**
Course Category: **Program Elective**	
Periods per week: **3 (L:0 T:0 P:3)**	Periods per semester: **45**

Course Objectives:

- Provide a hands on experience on Server Administration

Course Prerequisites:

Topic	Course code	Course name	Semester
Basic System Administration commands		System Administration Lab	5
Operating System Concepts		Operating System	5

<course code> *Server Administration should be registered along with this*

Course Outcomes :

On completion of the course, the student will be able to:

COn	Description	Duration (Hours)	Cognitive Level
CO1	Illustrate the basic system administration in Linux	12	Applying
CO2	Implement the Networking and Internet Services in Linux.	10	Applying
CO3	Install and Configure Internet Services in Linux	10	Applying
CO4	Install and Configure Linux Servers for real world applications.	10	Applying
	Lab Exam	3	

CO – PO Mapping

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3			3			
CO2	3			3			
CO3	3			3			
CO4	3	3	3	3		3	

3-Strongly mapped, 2-Moderately mapped, 1-Weakly mapped

Course Outline

Module Outcomes	Name of Experiment	Duration (Hours)	Cognitive Level
CO1	**Illustrate the basic system administration in Linux**		
M1.01	Demonstrate the Power, Control, and Flexibility of Linux command line.	6	Applying
M1.02	Illustrate the management of users and groups	2	Applying.
M1.03	Illustrate Process Controlling in Linux	2	Applying.
M1.04	Illustrate Linux Kernel compilation and patching	2	Applying.
CO2	**Implement the Networking in Linux**.		
M2.01	Illustrate the network configuration in Linux	4	Applying.
M2.02	Illustrate the configuration of FTP server, Apache Web Server and Secure Shell Server	6	Applying.
	Lab Exam – I	1.5	
CO3	**Implement the Networking and Internet Services in Linux.**		
M3.01	Illustrate the installation and configuration of NFS, Samba, DHCP Server	6	Applying.
M3.02	Illustrate the configuration of Printers	2	Applying.
M3.03	Illustrate the Backup Services	2	
CO4	**Install and Configure Linux Servers for real world applications.**		
M4.01	Open Ended ** Experiment:Install and configure for real world applications	10	Applying.
	Lab Exam – II	1.5	

** - **Sample Open Ended Experiment**

(Not for End Semester Examination but compulsory to be included in Continuous Internal Evaluation. Students can do open ended experiments as a group of 2-3. There is no duplication in experiments between groups.)

1. Install and Configure Web server.
2. Develop a custom Linux distribution.

Text / Reference

T/R	Book Title/Author
T1	Wale Soyinka, **Linux Administration: A Beginner's Guide**, McGraw-Hill Education, 7th Ed.
R1	Evi Nemeth,Garth Snyder, **UNIX and Linux System Administration Handbook**, Addison-Wesley, 5th Ed.
R2	Raphaël Hertzog and Roland Mas, **The Debian Administrator's Handbook**

Online Resources

Sl.No	Website Link
1	https://www.tutorialspoint.com/linux_admin/index.htm
2	https://www.linode.com/docs/guides/linux-system-administration-basics/
3	https://www.linuxfoundation.org