Faculty Name : **Vijaya Mishra**
Discipline : **CSE**
Semester : **7th**
Subject : **Unix & Linux Programming**
Lesson Plan Duration : **15 weeks (July 2018 to November 2018)**
Work Load(Lecture/ Practical)per week (in hours) : **04 Lecture, 02 Practical**

WEEK		THEORY	PRACTICAL	
	LECTURE DAY	TOPIC (INCLUDING ASSIGNMENT AND TEST)	PRACTICAL DAY	TOPIC
1st	I	Linux Startup, User accounts, Accessing	1st	Familiarize with Unix/Linux logging/logout and simple commands
	II	Linux - Starting and Shutting processes		
	III	Logging in and Logging out		
	IV	Unix Commands like zip, unzip, pack, unpack, compress, uncompress		
2nd	I		2nd	Familiarize with vi editor
	II			
	III	Shell Programming		
	IV			
3rd	I	Unix file system: Linux/Unix files	3rd	Using Bash shell develop simple shell Programs
	II	i-nodes and Structure		
	III	File System related Commands		
	IV	Shell as Command Processor		
4th	I	Shell Variables	4th	Develop Advanced shell programs using grep, fgrep&egrep
	II	Creating Command Substitution		
	III	Scripts, Functions		
	IV	Conditionals Loops, Customizing Environment		
5th	I	Class Test	5th	Compile and Debug various C programs using Content defined Chunking
	II	Introducing regular expressions patterns		
	III	Syntax, Character Classes		
	IV	Quantifiers		
6th	I	Introduction to grep	6th	Learning of Installation and upgradation of Linux operating system
	II	egrep, sed		
	III	Programming with awk and perl		
	IV	File Compression Techniques		
7th	I	Data Redundancy elimination using fingerprint generation	7th	Install Linux on a PC having some other previously installed operating system. All operating systems should be usable
	II	Data Similarities removal using delta techniques for data reduction storage		
	III	Parallel Compression with Xdelta utility		
	IV	Class Test		
8th	I	C compiler	8th	As Supervisor create and maintain user accounts, learn package installation, taking backups, creation of scripts for file and user management, creation of startup and shutdown scripts using at, cron etc
	II	vi editor, Compiler Options		
	III	Managing Projects		
	IV	Memory Management		
9th	I	Use of makefile, cmake	9th	Compile and Debug various C programs using Frequency based Chunking
	II	Dependency Calculations		
	III	Static and Dynamic Memory		
	IV	Static and Dynamic Libraries		
10th	I	Dynamic Loader	10th	Compile and Debug various C programs using Delta/ Xdelta
	II	Debugging tools like gdb		
	III	Fixed-size and Variable-size blocks of data files chunks divisor chunking techniques like Frequency Based Chunking		
	IV	Content Defined Chunking Unix based open source coding		
11th	I	Class Test	11th	Compile and Debug various C programs using Rabin Fingerprint Generator
	II	Processes		
	III	Starting and Stopping Processes		
	IV	Initialization Processes		
12th	I	rc and init files	12th	Compile and Debug various C programs using Parallel Compression Pcompress
	II	Job control - at, batch		
	III	Cron, Time		
	IV	Network Files		
13th	I	Security	13th	Write a Shell script program to display “HELLO WORLD”
	II	Privileges		
	III	Authentication		
	IV	Password Administration		
14th	I	Archiving	14th	Write a Shell script program to develop a scientific calculator
	II	Signals and Signal handlers		
	III	Threading, Linux I/ O Syst		
	IV	Networking tools like ping		
15th	I	Telnet, ftp, Route, Firewalls	15th	Write a Shell Script program to check whether the given number is even or odd.
	II	Backup and Restore tar, cpio, dd		
	III	Case Study: PCOMPRESS open source free software		
	IV	Class Test		