PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department Of Computer Science & Engineering

LESSON PLAN

Faculty Name: Er. Karun Handa **Course Title: Unix and Linux Programming**

Semester: 7th **Semester: 7th**

Sr. No.	Lecture No.	Topics To Be Covered	Covered On
1	L 1	**Unit–1: Basic Command Usage** Linux Startup: User accounts, accessing Linux - starting and shutting processes	16/07/2019
2	L 2	Logging in and Logging out, zip, unzip commands	17/07/2019
3	L 3	Basic commands of Unix	18/07/2019
4	L 4	Compress, uncompress, pack and unpack commands	19/07/2019
5	L 5	Shell Programming, Unix file system	23/07/2019
6	L 6	Linux/Unix files	24/07/2019
7	L 7	i-nodes and its structure, file system related command	25/07/2019
8	L 8	Shell as command processor	26/07/2019
9	L 9	Shell variables, creating command substitution, scripts	30/07/2019
10	L 10	Functions, conditionals, loops, customizing environment	31/07/2019
11	L 11	**File Permissions in Linux**	01/08/2019
12	L 12	Revision of 1st Unit	02/08/2019
13	L 13	**Unit-2: Filters and File Compression** Regular Expressions and Filters: regular expressions patterns,	06/08/2019
14	L 14	Syntax, character classes, quantifiers	07/08/2019

15	L 15	Introduction to grep its option with commands	08/08/2019
16	L16	Egrep and fgrep with example	09/08/2019
17	L 17	SED (Stream editior) basic commands	13/08/2019
18	L 18	SED commands with example	14/08/2019
19	L 19	Programming with awk (aho, Weinberger, kernigham)	15/08/2019
20	L 20	Awk programs	16/08/2019
21	L 21	Perl and its programs	20/08/2019
22	L 22	File compression techniques in Linux	21/08/2019
23	L 23	Data redundancy elimination using fingerprint generation de-duplication	22/08/2019
24	L 24	Data similarities removal using delta techniques for data reduction storage	23/08/2019
25	L 25	Parallel compression with Xdelta utility	27/08/2019
26	L 26	Revision of 2nd unit	28/08/2019
27	L 27	**Unit 3: Program Development Tools:** The C Environment: C compiler and compiler options	29/08/2019
28	L 28	vi editor	30/08/2019
29	L 29	**cat and vi command**	3/09/2019
30	L 30	Managing projects	4/09/2019
31	L 31	Memory management, use of makefile	5/09/2019
32	L 32	cmake, dependency calculations	6/09/2019
33	L 33	Memory management – static and dynamic memory, static and dynamic libraries	10/09/2019
34	L 34	dynamic loader, debugging tools like gdb	11/09/2019
35	L 35	fixed-size and variable-size blocks of data files	12/09/2019
36	L 36	chunks divisor chunking techniques like Frequency	13/09/2019

		Based Chunking and Content Defined Chunking	
37	L 37	Unix based open source coding	17/09/2019
38	L 38	Revision of 3rd unit	18/09/2019
39	L 39	**Unit 4: Process Control** Processes in Linux: Processes, starting and stopping processes	19/09/2019
40	L 40	Initialization processes, rc and init files	25/09/2019
41	L 41	Job control - at, batch, cron, time	26/09/2019
42	L 42	**Linux Process Life Cycle: Parent, Child and Init Process**	27/09/2019
43	L43	Network files, security, privileges	1/10/2019
44	L 44	Authentication, password administration and archiving	3/10/2019
45	L 45	Signals and signal handlers	4/10/2019
46	L 46	Threading, Linux I/O system	9/10/2019
47	L 47	Networking tools like ping, telnet	10/10/2019
48	L 48	ftp, Route and Firewalls	11/10/2019
49	L 49	Backup and Restore tar	15/10/2019
50	L 50	cpio, dd	16/10/2019
51	L 51	Case Study: PCOMPRESS open source free software	17/10/2019
52	L 52	Revision of 4th Unit	18/10/2019

Text Books:

Text Books:

1. John Goerzen: Linux Programming Bible, IDG Books, New Delhi, 2014.
2. Sumitabha Das: Unix – Concept and Applications, Fourth Edition TMH, 2015.
3. Neil Matthew, Richard Stones: Beginning Linux Programming, 4th. Edition, Wrox-Shroff, 2011.
4. Welsh & Kaufmann: Running Linux, O'Reiley & Associates, 2013.

Reference Book:

1. B.M. Harwani, Unix and Shell Programming, Oxford University Press, 2013.