

Govt. Polytechnic Hamirpur (H.P.)

Lesson Plan: Free and Open Source Software

Branch: Computer Engg.

Semester: 5th

Subject: FOSS

Teacher: AMIT NAYYER

Class Mode: Offline

Proposed lesson Plan

Lecture Number	Topics to be covered	Reference/ Resource	Remarks
<u>Unit 1 : Open Source Software</u>			
1	Open Source Software (OSS)	R3	Lecture delivery will be through classroom teaching and Notes will be shared during lecture
2	OSS advantages, Free Software	R3, R2	
3	Free and Open Source Software (FOSS), FOSS Licensing Models	R3, R2	
4	Introduction to Popular FOSS Software - Linux, LibreOffice	R2,	
5	GIMP	R1	
6	Blender	R1	
7	VLC Media Player	R2	
8	Mozilla Firefox	R1	
<u>Unit 2 : Introduction to Linux</u>			
9	Linux - History	R3	Lecture delivery will be through classroom teaching and Notes will be shared during lecture
10	Features	R3	
11	Applications	R3	
12	Distributions	R3	
13	Linux Architecture and Kernel	R1	
14	Boot Loader	R2	
15	Shell	R3	
16	Graphical User Interface and WSL	R1	
<u>Unit 3 : Linux File System</u>			
17	FHS	R3	Lecture delivery will be through classroom teaching as well as power point presentations.
18	Rules for Naming Files and Directories	R3	
19	File Types, Links - Hard and Soft	R3, R2	
20	Linux File Management Commands - cat, touch, head, tail, cp, rm, mv, more, less, pwd, mkdir, rmdir, ls, cd	R3, R2	
21	Chmod and Use of Wildcard Characters	R2,	
22	Standard Input, Standard Output and Standard Error Files	R1	
23	Pipes	R1	
24	Filters and Redirection	R2	

<u>Unit 4 : Basic Linux System Management</u>			
25	Users and Groups, Linux Super User, Primary and Secondary Groups, User and Group Management	R2	Lecture delivery will be through classroom teaching and Notes will be shared during lecture
26	Commands - groupadd, groupdel, groupmod, groups, useradd, userdel, usermod, users	R1	
27	File Permissions, File Permission Commands	R1	
28	chmod, chown, chgrp; Process	R2	
29	Foreground and Background Processes, Daemon	R2	
30	init Process, Process Management Commands	R3	
31	top, ps, kill; Configuration Files - hosts, fsta	R3	
32	passwd, shadow, group, resolv.conf	R2	
<u>Unit 5 : Linux Shell Scripting</u>			
33	Linux Shells, bash Shell	R3, R2	Lecture delivery will be through classroom teaching and Notes will be shared during lecture
34	Shell script, echo, read, Variables	R3, R2	
35	Naming Rules, Readonly Variable	R2,	
36	Unset Variables, Special Variables	R1	
37	(\$*, \$\$, \$#, \$?, \$n), Environment Variables	R1	
38	Positional Parameters, Command Substitution	R2	
39	Flow Control - if..then..fi, else	R3	
40	elif, case, while, until, for, break and continue	R2	
<u>Unit 6 : Linux Networking</u>			
41	Networking Terminology (basic concept only)	R1	Lecture delivery will be through classroom teaching and Notes will be shared during lecture
42	TCP/IP, IPv4 and IPv6	R2	
43	Addresses, Netmask, Gateway, DNS	R2	
44	DHCP, TCP Ports; Linux Networking Commands	R1	
45	ifconfig, finger, ping, arp, netstat, host,	R3	
46	traceroute, nmap, ssh, telnet, ftp; Linux Servers	R2	
47	Telnet Server, SSH Server, FTP Server, NFS Server	R1	
48	Proxy Server, DHCP Server, SAMBA.	R2	

Teaching Resources:

R1: Linux: The Complete Reference by Richard Petersen, McGraw Hill Education

R2. The official Ubuntu book by Matthew Helmke, Pearson Education

R3 Online Linux tutorials at <https://linux-tutorial.info>

Date:

Teacher Signature

Date:

c/s HOD Signature