

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik
Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF) **Course:** Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Course Code	Course Title	Abbr	Course Category	Learning Scheme						Credits	Paper Duration	Assessment Scheme										Total Marks
				Actual Contact Hrs./Week			SLH	NLH	Theory				Based on LL & TSL Practical				Based on SL					
				C	T	L			FA-TH			SA-TH	Total		FA-PR		SA-PR		SLA			
													Max	Min	Max	Min	Max	Min	Max	Min		
312001	Basics Linux Programing	BLP	DSC	2	-	2	-	4	2	-	-	-	-	-	25	10	25 @	10	-	-	50	

Total IKS Hrs for Sem. : 0 Hrs

Abbreviations: CL- ClassRoom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment Legends: @ Internal Assessment, # External Assessment, *# On Line Examination , @\$ Internal Online Examination

COURSE LEVEL LEARNING OUTCOMES (COS)

- CO1 - Install Linux operating system.
- CO2 - Execute general purpose commands of the Linux operating system.
- CO3 - Manage files and directories in Linux operating system.
- CO4 - Use vi editor in Linux operating system.
- CO5 - Write programs using shell script.

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO- 1	PSO- 2
CO1	3	2	2	3	1	-	3	2	3
CO2	3	-	1	3	1	-	3	2	3
CO3	3	-	1	3	1	-	3	2	3
CO4	3	2	2	3	1	-	3	2	2
CO5	3	2	2	3	1	-	3	3	3

Legends :- High:03, Medium:02,Low:01, No Mapping: -

*PSOs are to be formulated at institute level

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik

Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF)

Course: Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)		Actual Execution (From-To & No. of Lectures)		Pedagogy used (Teaching method /Media)	Remarks
				From	To	From	To		
01 (0)	CO1		Unit - I Introduction to Linux Operating System					Chalk, Board, PPT+ LCD Video, Google Classroom, MKCL ERA	
				02 Lectures					
		TLO 1.1, TLO 1.2	1.1 Introduction to Operating System and Linux. 1.2 History, Overview of Linux	16/12/25	17/12/25				
		TLO 1.3, TLO 1.4	1.3 Shell: Bourne, Korn, Cshell. 1.4 Linux releases, Linux File Systems (ext) and versions.	02 Lectures					
				23/12/25	24/12/25				
02 (0)	CO2		Unit – II General Purpose Utilities					Chalk, Board, PPT Videos , MKCL ERA	
				02 Lectures					
		TLO 2.1	2.1 cal: The calendar, date: Displaying the system date, echo: Displaying message, printf: An alternative to echo, bc: The calculator, script: Recording your session	30/12/25	31/12/25				
		TLO 2.2, TLO 2.3	2.2 Email basics, mailx: The universal mailer 2.3 passwd: Changing your password, who: Who are the users?, uname: Knowing your machine characteristics	02 Lectures					
				06/01/26	07/01/26				
		TLO 2.4	2.4 tty: Knowing your terminal, stty: Displaying and setting terminal characteristics	02 Lectures					
				13/01/26	14/01/26				

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik
Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF) **Course:** Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)	Actual Execution (From-To & No. of Lectures)	Pedagogy used (Teaching method /Media)	Remarks	
03 (0)	CO3		Unit - III File Management in Linux	02 Lectures		Chalk, Board, PPT, MKCL ERA		
		TLO 3.1	3.1 The file: Ordinary file, Directory file, Device file, File name, The parent-child relationship, UNIX file system tree, The Unix file system, The home directory 3.1.1 pwd: Checking your current directory, cd: Changing the current directory, mkdir: Making directories, rmdir: Removing directories, ls: Listing directory contents	20/01/26	21/01/26			
		TLO 3.2, TLO 3.3	3.2 Absolute pathnames, Relative pathnames 3.3 Handling ordinary files, cat: Displaying and creating files, cp: Copying file, rm: Deleting files, mv: Renaming files, more: Paging output	03/02/26	04/02/26			
		TLO 3.4, TLO 3.5	3.4 The lp subsystem: printing a file, file: knowing the file types 3.5 wc: Counting lines, words and characters, od: Displaying data in octal, cmp: Comparing two files, comm: What is common?, diff: Converting file to other	10/02/26	11/02/26			
					02 Lectures			

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik
Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF) **Course:** Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)		Actual Execution (From-To & No. of Lectures)		Pedagogy used (Teaching method /Media)	Remarks
		TLO 3.6	3.6 gzip and gunzip: Compressing and decompressing files, tar: The archival program, zip and unzip: Compressing and archiving together	02 Lectures					
				17/02/26	18/02/26				
		TLO 3.7, TLO 3.8	3.7 Basic file attributes, ls -l: Listing file attributes, the -d option: Listing directory attributes 3.8 File ownership, File permissions, chmod: Changing file permissions, directory permission, Changing file ownership, chown: Changing file owner, chgrp: Changing group owner	02 Lectures					
				17/02/26	18/02/26				
04 (0)	CO4	TLO 4.1, TLO 4.2	Unit - IV The vi Editor and Shell 4.1 The vi Editor: vi Command, Input, and Line Editing Modes. 4.2 Creating, Saving and Quitting a File in vi, Managing Editing Modes in vi.	02 Lectures				Chalk, Board, PPT Videos MKCL ERA	
				24/02/26	25/02/26				

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik

Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF) **Course:** Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)	Actual Execution (From-To & No. of Lectures)	Pedagogy used (Teaching method /Media)	Remarks		
		TLO 4.3, TLO 4.4	4.3 vi Editing Commands: Common Operations.	02 Lectures					
			4.4 Navigation: Movement in the four direction (h, j, k and l), Word navigation (b, e and w), Moving to Line extremes (0, and \$), Scrolling ([Ctrl-f], [Ctrl-b], [Ctrl-d] and [Ctrl-u], Absolute Movement (G)	24/02/26	25/02/26				
		TLO 4.5, TLO 4.6	4.5 Searching for a pattern(/ and ?), Repeating the last pattern search (n and N) 4.6 The Shell: The Shell's interpretive cycle, Shell offerings, Pattern matching: The wild-cards, Escaping and quoting, Redirection: The three standard files, /dev/null and /dev/tty: Two special files	02 Lectures					
				03/03/26	04/03/26				
		TLO 4.7	4.7 Pipes, tee: Creating a tee, Common substitution, Shell Variables	02 Lectures					
				03/03/26	04/03/26				
05 (0)	CO5		Unit - V Filters, Regular Expressions and Shell Programming	02 Lectures		Chalk, Board, PPT Videos , MKCL ERA			
				02 Lectures					
		TLO 5.1	5.1 Simple Filters: The sample database, pr: Paginating files, head: Displaying the beginning of	10/03/26	11/03/26				

Maharashtra State Board of Technical Education, Mumbai
TEACHING PLAN (TP)

K-1

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik

Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF)

Course: Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)		Actual Execution (From-To & No. of Lectures)		Pedagogy used (Teaching method /Media)	Remarks
			a file, tail: Displaying the end of a file, cut: Splitting a file vertically, paste: Pasting files, sort: Ordering file, uniq: Locate repeated and nonrepeated lines, tr: Translating characters						
		TLO 5.2	5.2 Filters using regular expressions, grep: Searching for a pattern, Basic regular expression (BRE)- An introduction, Extended regular expressions (ERE) and egrep, sed: The stream editor	02 Lectures					
				17/03/26	18/03/26				
		TLO 5.3	5.3 Essential Shell programming, Shell scripts, read: Making scripts interactive, Using command line arguments, exit and Exit status of command, The logical operators && and - Conditional executions	02 Lectures					
				24/03/26	25/03/26				
		TLO 5.4, TLO 5.5	5.4 The if conditional, Using test and [] to evaluate expressions, the case conditional, expr: Computation and string handling, \$0: Calling a script by different names 5.5 while: Looping, for: Looping with a list	02 Lectures					
				25/03/26	01/04/26				

ASSESSMENT METHODOLOGIES/TOOLS

A. Formative assessment (Assessment for Learning) (FA-TH)

Continuous assessment based on process and product related performance indicators. Each practical will be assessed considering 60% weightage is to process &40% weightage to product

B. Summative Assessment (Assessment of Learning) (SA-TH)

Institute Name: 0078-K. K. Wagh Polytechnic, Nashik
Academic Year: 2025-26 (EVEN)

Program: Information Technology (IF) **Course:** Basics Linux(BLP)

Course Code: 312001 **Scheme:** K

Semester: Second

CLASS: FYIF (PARAM)

Name of Faculty: Mrs. .P. A. Thakare

End semester Examination, Lab performance, Viva-Voce

SUGGESTED LEARNING MATERIALS / BOOKS

Sr. No	Author	Title	Publisher
1	Richard Petersen	Linux The Complete Reference	McGraw Hill, 6th edition ISBN Number 978-0071492478
2	Richard Blum	Linux command line andshell scripting	Wiley India ISBN Number 978-1118983843
3	Prof. Dayanand Ambawade	Linux Lab: Hands on Linux	Dreamtech Press ISBN Number 9789350040003
4	Sumitabha Das	Unix Concepts and Applications	McGraw-Hill Education (India) Pvt Limited, 2006ISBN Number 978-0070635463

LEARNING WEBSITES & PORTALS

Sr. No	Link /Portal	Description
1	https://maker.pro/linux/tutorial/basic-linux-commands-for-beginners	Linux Basic Commands
2	https://www.guru99.com/must-know-linux-commands.html	Linux Basic Commands
3	https://www.shellscript.sh/	Shell Scripts and Programs
4	https://www.tutorialspoint.com/unix/shell_scripting.html	Shell Scripts and Programs examples
5	https://spoken-tutorial.org/tutorial	Online Course

Mrs. P. A. Thakare
Faculty

Ms. M. S. Karande
HOD IF-dept