Maharashtra State Board of Technical Education, Mumbai

TEACHING PLAN (TP)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik   **Semester:** Second
Programme and Code: Information Technology (IF)   Academic Year: **2025-26**
Course and Code: Basics Linux (BLP)   **Course Code:** 312001
Name of Faculty: Ms. D. S. Katkade   **Scheme:** K

CLASS: FYIF (Cray)

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.

TEACHING-LEARNING & ASSESSMENT SCHEME

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

Total IKS Hrs. for Sem.: 2 Hrs.

Abbreviations: CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hour 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

SUGGESTED COS - POS MATRIX FORM

Course Outcomes (COs)	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

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Unit No. (Allotted Hrs.)	CO (Mention only Number)	TLO Mention only Number	Unit Name and Learning Content Title/ Details	Plan No. of Lecture		Actual Execution		Teaching method/ Media	Remark
				From	To	From	To		
1(4)	CO 1		**Unit - I Introduction to Linux and Operating System**					Chalk, Board, PPT, Learn Live, Videos, Google Classroom	
		TLO 1.1, TLO 1.2,	1.1 Introduction to Linux Operating System 1.2 History, Overview of Linux	**2 Lectures**					
				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.	**2 Lectures**					
				23/12/25	24/12/25				

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				From	To	From	To		
2(6)	CO 2		**Unit - II General Purpose Utilities**					Chalk, Board, PPT, Learn Live, Videos, Google Classroom	
		TLO 2.1 TLO 2.2,	**2.1** cal: The calendar, date: Displaying the system date, echo: Displaying message, printf: An alternative to echo **2.2** Email basics, mailx: The universal mailer	**3 Lectures**					
				30/12/25	07/01/26				
		TLO 2.3,	**2.3** passwd: Changing your password, who: Who are the users?, uname: Knowing your machine **2.4** tty: Knowing your terminal, stty: Displayig and setting terminal characteristics	**3 Lectures**					
				13/01/26	20/01/26				

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				From	To	From	To		
			Unit - III File Management in Linux						
3(07)	CO 3	TLO 3.1, TLO 3.2	**3.1** The file: Ordinary file, Directory file, Device file, File name, The parent-child relationship, UNIX file directory, pwd: Checking your current Removing directories, ls: Listing directory contents **3.2** Absolute and Relative pathnames	3 Lectures				Chalk, Board, PPT, Learn Live, Videos, Google Classroom	
				21/01/26	04/02/26				
		TLO 3.3 TLO 3.4	**3.3** Handling ordinary files, cat: Displaying and creating files, cp: Copying file, rm:, more: Paging output, **3.4** gzip and gunzip: Compressing and decompressing files, tar: The archival program, zip	2 Lectures					
				10/02/26	11/02/26				
		TLO 3.5 TLO 3.6	**3.5** Basic file attributes, ls -l: Listing file attributes, the -d option: **3.6** File ownership, File permissions, chmod: Changing file permissions, directory	2 Lectures					
				17/02/26	18/02/26				

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Unit No. (Alloted Hrs.)	CO Mention only Number	TLO Mention only Number	Unit Name and Learning Content Title/ Details	Plan No. of Lecture		Actual Execution		Teaching method/ Media	Remark
				From	**To**	**From**	**To**		
4(7)	CO 4		**Unit - IV The vi Editor and Shell**					Chalk, Board, PPT, Learn Live, Videos, Google Classroom	
		TLO 4.1, TLO 4.2	**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.	**2 Lectures**					
				17/02/26	18/02/26				
		TLO 4.3 TLO 4.4	**4.3** vi Editing Commands: Common Operations. **4.4** Navigation: Movement in the four direction (h, j, k and l), (b, e and w), Moving Movement (G)	**2 Lectures**					
				23/02/26	04/03/26				
		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 **4.7** Pipes, tee: Creating a tee, Common substitution, Shell Variables	**3 Lectures**					
				23/02/26	04/03/26				

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Chap No. (Allotted Hrs.)	CO Mention only Number	TLO Mention only Number	Unit Name and Learning Content Title/ Details	Plan No. of Lecture		Actual Execution		Teaching method/ Media	Remark
				From	**To**	**From**	**To**		
			Unit - V Filters, Regular Expressions and Shell Programming						
5(6)	CO 5	TLO 5.4	**5.1** Simple Filters: The sample database, pr: Paginating files, head: vertically, paste: nonrepeated lines, tr: Translating characters	**2 Lectures**				Chalk, Board, PPT, Learn Live, Videos, Google Classroom	
				10/03/26	11/03/26				
		TLO 5.5, TLO 5.6	**5.2** Filters using regular expressions, grep: Searching for a pattern, Basic regular expression **5.3** Essential Shell programming, Shell scripts, read: Making scripts interactive, Using command line **5.4** The if conditional, Using test and [ ] to evaluate expressions, the case conditional, expr:	**4 Lectures**					
				10/03/26	18/03/26				

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
- 1) 60% weightage is to process
- 2) 40% weightage to product

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B. Summative Assessment (Assessment of Learning)
- End semester examination, Lab performance, Viva voce

SUGGESTED LEARNING MATERIALS / BOOKS

Sr. No	Author	Title	Publisher with ISBN Number
1	Richard Petersen	Linux The Complete Reference	McGraw Hill, 6th edition ISBN Number 978-0071492478
2	Richard Blum	Linux command line and shell 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, 2006 ISBN Number 978-0070635463
1	Richard Petersen	Linux The Complete Reference	McGraw Hill, 6th edition ISBN Number 978-0071492478
2	Richard Blum	Linux command line and shell scripting	Wiley India ISBN Number 978-1118983843

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

Ms. D. S. Katkade
(Name & Signature of Staff)

Ms. M. S. Karande
(Name & Signature of HOD)