



Sub Committee for Curriculum Development

Course Name : **Linux Shell Scripting**

Course Code : **T3200**

(UG/PG) : **UG**

Number of Credits : **02**

Level : **3**

Learning Objective(s):

Hands on experience on Linux OS to understand the functionalities of operating system, and various flavors of shell scripting. After completing this students will be able to understand:

1. Basis of Linux shell scripting
2. Understand the basics of user commands
3. Write shell scripts and use it to save time with automated scripts
4. Customizing shell start-up files
5. Creating nifty utilities
6. Control your administration tasks such as Linux user management, Linux system monitoring etc

Pedagogy:

1. Lectures
2. Class work discussion
3. Hands On Exercise

Pre-learning:

Operating System

Course Outline:

S.No.	Topic	Hours
1	Brief recap of Linux/Unix architecture and concepts	2
2	Cron, significant file formats	2
3	Bash profiles, mounting	3
4	What is the Shell? <ul style="list-style-type: none">• Shell Responsibilities• Program Execution• Filename Substitution• Variable Expansion• Environment Variables• Quoting	4
5	I/O Redirection <ul style="list-style-type: none">• stdin, stdout & stderr• Device Files• Here Documents• Pipes & Filters	1
6	Commands and Filters <ul style="list-style-type: none">• cat, touch, find• head, tail• sort, cut• wc• grep family• xargs• pv	3
7	Regular Expressions <ul style="list-style-type: none">• Regular Expressions Intro• BREs (Basic Regular Expressions)•	1
8	Shell Scripts And Programming <ul style="list-style-type: none">• What is a Shell Script?• Invoking Shell Scripts• Permissions• Comments• Which Shell gets run?• Passing Arguments from the Command Line• Grouping Commands	2
9	Making Decisions and Loops <ul style="list-style-type: none">• Exit Status• if Statement• Testing Conditions• read command• Arithmetic• case Statement	6
10	Benefits and Uses of Loops <ul style="list-style-type: none">• for Loop• Three-expression for Loop• Infinite Loops• Conditional Exits with break• Continuation with continue• while Loop• until Loop	6

Books Recommended

- Linux Shell Scripting Tutorial v1.05r3 A Beginner's handbook Copyright © 1999-2002 by Vivek G. Gite
- Manual Pages

Suggested Evaluation Methods:

- Practical Test
- Mid Term Exam
- End Term Exam
- Quiz (moodle)

Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered
1	Operating System Internals	SICSR(BCA)

Name of Member	Tejaswini Apte	Shrikant Mapari			
Designation	Asst. Professor	Asst. Professor			
Org. / Inst.					
Signature					

Name of the Expert:

Signature:

Date: