UNIX Programming Language

Course Code	20EC2702C	**Year**	IV	**Semester**	I
Course Category	Open Elective-IV	**Branch**	ECE	**Course Type**	Theory
Credits	3	**L-T-P**	3-0-0	**Prerequisites**	Computer Architecture & Organization
Continuous Internal Evaluation:	30	**Semester End Evaluation:**	70	**Total Marks:**	100

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Apply Basic concepts of UNIX Architecture, File system and basic commands to Shell Programming. (L3).
CO2	Integrate the concepts that he/she has learnt, for developing large computer programs and applications that are part of bigger projects (L3).
CO3	Develop scripts for automating day to day tasks in projects for better and faster execution of work (L3).
CO4	Survey many of the modern language features that show up frequently in Shell programming languages (L4)

Mapping of course outcomes with Program outcomes (CO/ PO/PSO Matrix)

Note: 1- Weak correlation 2-Medium correlation 3-Strong correlation

* - Average value indicates course correlation strength with mapped PO

COs	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**	**PSO 1**	**PSO 2**
CO1	3											2		
CO2	2		3									3	2	
CO3	3		2										3	
CO4		3			3					3				2
Average * (Rounded to nearest integer)	3	3	3		3					3		3	3	2

Syllabus		
Unit No.	**Contents**	**Mapped CO**
I	Introduction to the Unix Operating System : A brief history of Unix, The Unix kernel, The UNIX file system , Getting started navigating the file system , The file system structure , Directories and files , Pathnames, Navigating the file system , Exercise: Logging on to the system, Exercise: Navigating	CO1,CO2,CO3

	the file system	
II	Unix Basic Commands :Command line syntax, Basic file handling commands , Directory handling commands , Filename wildcard characters ,Exercise: Manipulating files and directories	CO1,CO2,CO3
III	Redirection and Pipes : Input redirection ,Output redirection, Pipes , Exercise: Using redirection and pipe facilities	CO1,CO2,CO3
IV	C Shell Programming: Recalling and Editing Commands , Overview ,The bash shell , The korn shell , Exercises: Recall and Edit Command ,Job Control	CO3,CO4
V	Searching and Replacing Text : Replacing text ,Using the vi editor, Using sed for search and replace , Searching for text with grep, Linking files, Exercises: Searching and Replacing Text	CO3,CO4

Learning Resources
Text Books
1. Gail Anderson and Paul Anderson, "The Unix C Shell Field Guide", Prentice-Hall, 1986.
Reference Books
1. Richard Petersen, "Linux - The Complete Reference", 6th Ed., TMH, 2008.
e- Resources & other digital material
1. https://nptel.ac.in/courses/117106113

Utilization of Electrical Power

CourseCode	20EE2702A	Year	IV	Semester	I
Course Category	OE-IV	Branch	Common to all	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	--
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Understand the utilization of electrical systems and their advantages in industrial applications. (L2)
CO2	Apply the knowledge to select suitable motor for electric drives, appropriate heating / welding techniques and Illumination systems in various industrial applications. (L3)
CO3	Apply the knowledge to select suitable track electrification system and traction motors. (L3)
CO4	Analyze the concepts of electric drives, different heating/welding techniques and various Illumination systems for industrial applications. (L4)
CO5	Analyze the performance parameters of speed-time curves for different services and the mathematical concepts to design traction system. (L4)
CO6	Submit a report on electric drives, electric heating & welding, illumination and electric traction system.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1														
CO2	3					1								
CO3	3						1							
CO4		3				1								
CO5		3					1							
CO6		3				3			3	3				

Syllabus		
Unit No.	**Contents**	**Mapped Co**
1	**Electric Drives** Type of electric drive, choice of motor, starting and running characteristics, speed control, temperature rise of electrical machines, heating-time and cooling-time curves, selecting motor power rating for continuous, intermittent and short time duty, types of industrial loads, applications of electric drives.	CO1 CO2 CO4 CO6