

**SWARNANDHRA
COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

SEETHARAMPURAM, NARSAPUR-534280, WG- DT, AP

DEPARTMENT OF MASTER BUSINESS ADMINISTRATION

TEACHING PLAN

Course Code	Course Title	Year/Sem	Branch	Contact Hrs/Week	Academic Year	Commencement of Class work
24MB2L01	R-Programming Lab	I/II	MBA	3	2025-2026	2.02.2026

COURSE OUTCOMES (CO): At the end of this course, students will be able to:

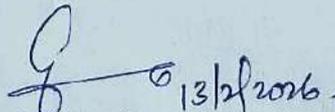
- List motivation for learning a programming language [K1]
- Access online resources for R and import new function packages into the R workspace [K3]
- Import, review, manipulate and summarize data-sets in R [K4]
- Explore data-sets to create testable hypotheses and identify appropriate statistical tests [K5]
- Perform appropriate statistical tests using R Create and edit visualizations [K4]

S. No.	Program	Proposed Number of Labs
1.	Basic Math Operations: Perform the following arithmetic operations in R: a) Add two numbers b) Multiply two numbers c) Divide one number by another	1
2.	Working with Vectors: a) Create a vector containing quarterly sales data b) Calculate the total and average sales	1
3.	Data Frames: a) Create a data frame for product sales b) Display the data frame	1
4.	Matrices and Arrays a) Create a 3x3 matrix with numbers from 1 to 9 b) Calculate the row sums and column sums	1

5.	Control Statements: Write a program to categorize sales as 'High Sale' or 'Low Sale' using if-else	1
6.	Loops and Functions: a) Write a recursive function to calculate factorial b) Calculate the factorial of 5	1
7.	Recursion and Quick Sort: a) Write a recursive function to implement Quick Sort b) Use it to sort a numeric vector	1
8.	Calculating Probability: Calculate the probability of getting exactly 2 successes in 5 trials with a 0.5 success rate	1
9.	Linear Algebra Operations: a) Perform matrix addition and subtraction b) Multiply two matrices c) Calculate the transpose and inverse of a matrix d) Perform dot product and cross product of vectors	1
10.	Vector Cross Product: Write a program to compute the cross product of two 3D vectors	
11.	File I/O: a) Write the sales data frame to a CSV file b) Read the data back from the CSV file	1
12.	Creating Graphs: Create a bar plot for quarterly sales data	1
13.	Line Graphs: Create a line graph showing monthly sales trends a) Use different colors and markers for better visualization b) Add appropriate titles and labels	1
14.	Normal Distribution: Plot a standard normal distribution curve	1
15.	Correlation: Calculate the correlation between height and weight	1
16.	T-Test: Perform a one-sample t-test on the given data with a mean of 2.5	1

f. Subhadra Devi

Faculty


13/2/2016
Head of the Department


Principal