SREE VIDYANIKETHAN ENGINEERING COLLEGE (Autonomous)
SREESAINATH NAGAR, A. RANGAMPET-517 102

SREE VIDYANIKETHAN Engineering College (Autonomous)
Accredited by NAAC with 'A' Grade

Lesson Plan

Name of the Subject: Research Methodology **Name of the faculty Member:** Dr.K. Delhi Babu
Class& Semester: M. Tech. I-Semester   **Section: CS**

S. No.	Topic	No. of periods required	Date(s) covered	No. of Periods required	Book(s) followed	Topics for self study
Unit-I: Introduction to Research Methodology						Problems encountered by researchers.
1.	Research objective and Motivation	1			T1	
2.	Types of Research –Descriptive vs Analytical, Applied vs Fundamental, Quantitative vs Qualitative, Conceptual vs Empirical	1			T1	
3.	Research Approaches	1			T1	
4.	Research and Scientific Methods	1			T1	
5.	Research Process	2			T1	
6.	Criteria of Good Research	1			T1	
	Total of periods required:	**7**				
Unit-II: Research Problem and Design						Experimental designs. Developing research plan.
7.	What is Research Problem?	1			T1	
8.	Selecting the Problem	1			T1	
9.	Necessity of Defining the Problem	1			T1	
10.	Techniques involved in Defining a Problem	2			T1	
11.	What is Research Design? Its need and features	1			T1	
12.	Important concepts of Research Design	1			T1	
13.	Designing Methods: Research design in case of exploratory research studies, Research design in case of descriptive and diagnostic research studies, Research design in case of hypothesis-testing research studies	2			T1	
	Total of periods required:	**9**				
Unit-III: Data Collection, Analysis, and Hypothesis						Guidelines for constructing questionnaires and interviews.
14.	Collection of Primary Data: Observation Method, Interview Method, Questionnaires, Schedules, Other Methods	1			T1	
15.	Collection of Secondary Data	1			T1	
16.	Selection of Appropriate Method for Data Collection	1			T1	
17.	Processing Operations: Editing, Coding, Classification and Tabulation	2			T1	
18.	Types of Analysis	1			T1	

No.	Topic					
19.	What is Hypothesis? Basic Concepts of Testing Hypothesis:Null hypothesis and alternative hypothesis,Level of significance, Decision rule, Type I and Type II errors, Two-tailed and One-tailed tests	2			T1	
20.	Hypothesis Testing Procedure	1			T1	
	Total of periods required:	**9**				
	Unit-IV: Statistics in Research					
21.	Review of Statistical Techniques: Mean, Median, Mode	1			T1	Simple regression analysis.
22.	Geometric Mean, Harmonic Mean, Variance, Standard Deviation	1			T1	
23.	Measure of Asymmetry	1			T1	
24.	Normal Distribution	2				
25.	Chi-Square as a Test for Comparing Variance	1			T1	
26.	Steps Involved in Applying Chi-Square Test	1			T1	
27.	Problems	2			T1	
	Total of periods required:	**9**				
	Unit-V: Interpretation and Report Writing					
28.	Interpretation: Meaning, Importance	1			T1	Mechanics of writing research report.
29.	Interpretation: Techniques and Precautions	1			T1	
30.	Report Writing: Significance and Different Steps	2			T1	
31.	Types of Reports	1			T1	
32.	Precautions in Report Writing	1			T1	
	Total of periods required:	**6**				
	Grand total of periods required:	**40**				

TEXT BOOK:

T1. C.R. Kothari, *Research Methodology: Methods and Techniques*, New Age International Publishers, New Delhi, 2nd Revised Edition, 2004.

REFERENCES:

R1. Ranjit Kumar, *Research Methodology: A step-by-step guide for beginners*, Sage South Asia, 3rd ed., 2011.

R2. R. Panneerselvam, *Research Methodology*, PHI learning Pvt. Ltd., 2009