SURESH GYAN VIHAR UNIVERSITY

Established by Government of Rajasthan U/S 2(f) of UGC Act 1956
vide Suresh Gyan Vihar University Act 2008 (Act no. 16 of 2008)

Ph.D. COURSE WORK SYLLABUS

Paper-I RESEARCH METHODOLOGY AND COMPUTER APPLICATION
(Common to All Faculty)

Time Duration: 3hrs **M.M. - 100**

1) **Introduction to Research Methodology** : Meaning of Research, Objectives of Research, Motivations in Research, Types of Research, Research Approaches, Significance of Research, Research Methods v/s Methodology, Research and Scientific Methods, Research Process, Criteria of Good Research

2) **Defining the Research Problem** : What is Research Problem?, Selecting the Problem, Necessity of and Techniques in defining the problem

3) **Sample Design**: Implication, Steps. Criteria for selecting a sample procedure, Characteristics of Good sampling Procedure, Types of Sample Design, Selecting Random Samples, Complex random sampling Design

4) **Methods of Data Collection**: Collection of Primary Data, Observation Method, Interview method, Collection of Data through questionnaire and Schedules, Other methods. Collection of Secondary Data, Selection of appropriate method for data collection, Case Study Method, Guidelines for developing questionnaire, successful interviewing. Survey v/s experiment

5) **Processing and Analysis of Data:** Measures of Central Tendency, Dispersion,. correlation and Regression, Chi- square test : Applications, Steps, characteristics, limitations, Analysis of Variance and Co-variance

6) **Testing of Hypothesis**: Meaning, Basic concepts, Flow diagram, Power of a hypothesis test, Important parametric tests, Hypothesis Testing of Means, hypothesis testing of Correlation coefficients, Limitations of Tests of hypothesis.

7) **Computer Fundamentals-** Computer Basics, Data Representation, Input / Output Units, Computer memory, Computer Generation and Classification, Computer Languages, OS, Types of OS, Services and Components of OS, Computer Networks, LAN, MAN, WAN, Internet and WWW, E-mail

8) **Introduction to Word processing package**- Creating and Editing a word document, creating a research paper, creating a cover letter and a resume, Creating a document with a title page, table, chart and watermark, Creating a webpage using word, Mail Merge, creating a professional newsletter

9) **Introduction to Spreadsheet package**-Features and functions of spreadsheet, creatng spreadsheet and enter data, format worksheets, adding graphics, printing, Calculate, manipulate and analyse data, cstom calculations, consolidating worsheets, pivot tables, charts, performing what - if analysis

10) **Introduction to Presentation Tools**- Features and functions, Creating presentation, master page, adding animation, Customizing presentation, showing presentation, printing handouts.

Reference Books: Latest Editions of following Books

1) Kothari, C.R., Research Methodology (Methods and Techniques), New Age Publisher
2) Fundamentals of modern statistical methods By *Rand R. Wilcox*
3) Power Analysis for Experimental Research A Practical Guide for the Biological, Medical and Social Sciences by *R. Barker Bausell, Yu-Fang Li* Cambridge University Press
4) Design of Experiments: Statistical Principles of Research Design and Analysis, by *Robert O. Kuehl Brooke/Cole*
5) Fundamentals of Computers by Rajaraman, Prentice Hall India Pvt. Limited
6) Microsoft Office Word 2007: Complete Concepts and Techniques by Gary B. Shelly, Thomas J. Cashman, Misty E. Vermaat, Cengage Learning Inc.
7) How to Do Everything with Microsoft Office Excel 2007 by Guy Hart-Davis, McGraw-Hill
8) Learning Microsoft PowerPoint 2007 by Catherine Skintik, Pearson Education