

**OPJS UNIVERSITY, RAWATSAR KUNJLA- RAJGARH
CHURU**
Course work
Syllabus

Paper – 1st Research Methodology

UNIT – I

Introduction: Definition of Research, Qualities of Researcher, Components of Research Problem, Various Steps in Scientific Research, Types of Research; Hypotheses Research Purposes - Research Design - Survey Research - Case Study Research.

UNIT-II

Data Collection: - Sources of Data: Primary Data, Secondary Data; Procedure Questionnaire - Sampling Merits and Demerits - Experiments - Kinds - Procedure; Control Observation - Merits - Demerits - Kinds - Procedure - Sampling Errors - Type-I Error - Type-II Error.

UNIT-III

Statistical Analysis: Introduction to Statistics - Probability Theories - Conditional Probability, Poisson Distribution, Binomial Distribution and Properties of Normal Distributions, Point and Interval Estimates of Means and Proportions; Hypothesis Tests, One Sample Test - Two Sample Tests / Chi-Square Test, Association of Attributes - t-Test - Standard deviation - Co-efficient of variations - Index Number, Time Series Analysis, Decision Tree.

UNIT -IV

Statistical Application: Correlation and Regression Analysis - Analysis of Variance, Completely Randomized Design, Randomized Complete Block Design, Latin Square Design - Partial and Multiple Correlation - Discriminate Analysis - Cluster Analysis - Factor Analysis and Conjoint Analysis - Multifactor Evaluation, Two-factor Evaluation Approaches.

UNIT - V

Research Reports: Structure and Components of Research Report, Types of Report, Good Research Report, Pictures and Graphs, Introduction to SPSS.

References:-

1. Wilkinson & Bhandarkar: Methodology and Techniques of Social Research.
2. Pauline Vyoung: Scientific Social Surveys and Research.
3. Panneerselvam, R., Research Methodology, Prentice Hall Of India, New Delhi, 2004.
4. Kothari: Research Methodology.
5. Festinger. L & D. Katz: Research Methods in Behavioral Science.
6. Sellitz, Et Al: Research Methods in Social Relations

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Paper- 2nd Computer Application

- Introduction
Classification of computers, computer memory, types of software's: application of system software's operating systems and types, single user, multi user, multi-tasking single tasking, application of computer for business and research.
- Data Communication and networks
Data communication concepts, local area network, wide area network, internet, intranet, extranet, website. Email, search engines-enterprise E communication and E collaboration
- MS Office and its application
File handing in window, various versions of MS Office, M S-Word: Test formatting, Mail merge, Macro, M S-Excel: Features, various formulas and functions M.S. Power Point: Creating presentations and adding effects.
- SPSS
Introduction to SPSS: Definition, objectives and features, data analysis using SPSS: Data entry creating variables, switching to data labels, data analysis: Frequencies, recording into different variables, cross tabulations and layers.
- Application of Internet in research
INFLIBNET, Use of Internet, sights (DOAJ), Use of E Journals, Use of E- library, use of EBSCO HOST online database of Academic Libraries.

Paper – 3rdQuantitative Method

- Meaning and definition of quantitative method
- Arranging data to convey meaning – Tables, Graphs and Frequency Distribution
- Measures of Central Tendency and Dispersion
- Simple and Multiple regression and correlation
- Association of Attributes
- Probability – probability Distributions, Binomial, Poisson and Normal
- Liner Programming - Formulation and Graphical solution to two variables – Assignment Problems, Transportation problems
- Queuing Theory – Single Server And Multi-Server
- Markov chains with Simulation Techniques – Monte Carlo Simulation
- Game theory – 2x2 zero sum game with dominance – pure strategy and mixed strategy
- Decision Theory – 5 criteria of decision making
- Chi-square
- Discriminant Analysis
- Factor Analysis
- Cluster Analysis
- Multidimensional Scaling
- 'T' Test
- 'F' Test
- 'Z' Test

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Paper – 4th Reviewing of Published Research in the Relevant Field

- Examining the methods of evaluating and interpreting published research.
- Developing skills needed to research available literature for information relevant to a given topic.
- Exploring the principles and techniques of topic/project development and testing.
- Examining the methods of evaluating and interpreting data collected in the research process.
- Developing an understanding of the various statistical methods that can be used to analyze data.
- Demonstrating the ability to use statistical analysis tools and apply them in decision making activities.
- Demonstrating the ability to create a template document that can be used to complete your research project or thesis

Course work Plan:-

(A). 1st Phase

1. Research Methodology
2. Computer Application

(B). 2nd Phase

1. Quantitative method
2. Reviewing of published research in the relevant field.

The above phase of course work classes shall be completed in a semester. The university shall manage part time or continue/residential classes for course work.

Study plan-

The course work classes are mandatory to attend 3 days in a month alternatively.

The assignment should be submitted time to time.

Evaluation examination held in end of course time.

**Director
OPJS University
Churu**