

DISCIPLINE SPECIFIC ELECTIVE COURSE 12 (DSE-12): RESEARCH METHODOLOGY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course
		Lecture	Tutorial	Practical/ Practice		
Research Methodology (DSE 12)	4	3	0	1	Class 12	None

Learning Objectives

The course provide an understanding of the methods of conducting research through:

- (i) introducing students to basic concepts of quantitative and qualitative research methods.
- (ii) scientific methods of collecting reliable data and appreciating primary and secondary data
- (iii) parametric and non parametric tests and interpretation of the results
- (iv) publishing of research and issues of ethics in data collection and use.

Learning outcomes

By studying this course, the students will be able to:

- Assess the roles of the researcher and the informant in the research process and be in a position to apply qualitative and quantitative research methodology.
- Perform literature reviews using print and online databases
- Learn about the various formats for citations of materials
- Describe sampling methods, measurement scales and instruments, and their appropriate uses
- Learn the rationale for research ethics
- Provide understanding of appropriate statistical techniques for summarizing and displaying business and economic data.
- Perform the basic qualitative and quantitative data analysis in a clear concise and understandable manner with an in-depth, faster and accurate univariate, bivariate and multivariate data analysis.

SYLLABUS OF DSE-12

Unit 1: Elements of Research

(15 hours)

Research- Definition, characteristics, Objectives. Types of Research- Quantitative Vs Qualitative; Descriptive, Exploratory and Causal. Research Methodology- Research Process, Formulating the Research Problem, Research Questions. Hypothesis-Formulation of Hypothesis, Role of Hypothesis, tests of Hypothesis and Errors in hypothesis testing. Research Design - importance and types, features for a good research design. Concept of Population and Sample, Sampling Design- Probability and non-probability Sampling techniques, Sample Size and sampling Error.

Unit 2: Understanding Data and its Collection

(15 hours)

Data types - Nominal, Ordinal, Interval and Scale

Primary and Secondary Data- advantages and disadvantages. Primary Data Collection: Observation method, Interview method, Questionnaires-prerequisites and designing, Case Study method Scales-Understanding, Construction and Application (Graphic Rating, Likert scale, paired comparison, ranking, constant sum, semantic differential scale). Secondary sources of data- previous empirical studies, NSSO, CSO, RBI, World Bank.

Unit 3: Processing and Analysis of Data (10 hours)

Data recording, conducting univariate and bi-variate analysis-using-descriptives, Cross-tabs-chi-square tests of independence, goodness of fit, One Sample t-test, Independent Sample t-test, Paired Sample t-test, (Assumptions Testing and Inferential Analysis ANOVA, Repeated measure ANOVA, MANOVA.

PCA, Cluster analysis, Factor Analysis, Discriminant analysis.

Unit 4: Additional Topics in Research (5 hours)

Review of Literature-techniques, do's and don'ts of conducting literature survey, citation, referencing styles, ethics in research.

Practical Component (30 hours) : Practicals to be based on use of a statistical software to enable to student to implement all the concepts and tools taken up in the theory classes in the course.

Essential/recommended readings

1. Donald R Cooper & Pamela S Schindler, "Business Research Methods", McGraw Hill
2. Business Research Methods – Alan Bryman& Emma Bell, Oxford University Press.
3. Ranjit Kumar, "Research Methodology: A Step-by- Step Guide for Beginners" Sage
4. Joseph F. Hair, Jr. William C. Black, Barry J. Babin, Rolph E. Anderson," Multivariate Data Analysis, Seventh Edition-Pearson's New International Edition

Suggestive readings

1. Amir D Aczel, "Complete Business Statistics", McGraw Hill Education.
2. Naresh K. Malhotra, "Marketing Research: An Applied Orientation" PHI
3. Field, Andy, "Discovering Statistics using IBM SPSS Statistics", 5th Edition, SAGE.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.