University of Mysore

**Department of Library and Information Science**

PhD Coursework Syllabus

**Paper 1: Research Methodology**

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| **Existing** | **Revised** | **Modifications Suggested** |
| **Advanced Research Methodology** | **Research Methodology** |
| **Unit-1**  Research methods: Scientific methods, Historical methods, Descriptive methods, Survey method, Observation method, Experimental method, Case-Study method, Delphi method, Content analysis and informatics and Scientometrics. | **Unit-1**  Research – Meaning, need and Significance of Research, Objectives of Research, Types of Research – Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical., Research Methods v/s Methodology, Research and Scientific Methods, Research Process, Criteria of Good Research. Research Design – Conceptualization and operationalization; Identification and formulation of problems; Hypothesis; Nominal and operational definition, ethic aspects; Writing research proposals. Literature search -- Reviewing of articles. | **Unit-1**  Research: Meaning, Definition, Purpose. Types of Research. Steps in Research Process. Criteria of Good Research. Identification and Formulation of Research Problems. Literature Review: Its Purpose and Objectives in Research. Organizing the Related Literature. Sources and Search Techniques. Formulation of Hypothesis. Research Design. Writing Research Proposals. |
| **Unit-2**  Research techniques, tools and sampling: Questionnaire, Scheduling, Interview, Observation, Scales and checklist, Library records and reports, Concept of study population and sampling, need for sampling, Types of Sampling – Random and non-random sampling techniques. | **Unit-2**  Research Methods of Data Collection: Collection of Primary Data, Observation Method, Interview method, questionnaire and Schedules, scientific, historical, descriptive, survey methods, case studies, Delphi & experimental methods. Guidelines for developing questionnaire, successful interviewing. Survey v/s experiment. 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. | **Unit-2**  Research Methods, Tools and Techniques in Library and Information Science. Qualitative & Quantitative Methods: Use of Primary and Secondary Documentary Sources, Interviewing, Focus Groups, Case Studies, Diaries, Observation, Evaluation, Delphi Method, Discourse Analysis, Visual Analysis, Surveys, Analysis of Records (bibliometrics, system logs, content analysis) and Experimentation. Interviewing Techniques, Questionnaire Design. Variables, Samples and Sampling Techniques. Validity, Reliability and Representativeness of Data. |
| **Unit 3**  Data processing and statistical analysis : Statistical analysis of data; Measures of central tendency, Mean, Median & Mode; Measures of dispersion – Range, intermediate ranges, measures of aggregate dispersion, mean-absolute deviation, the variance and standard deviation & normal distribution. Chi-square test. | Unit 3  Processing and Analysis of Data: Scales of measurement; Measures of central tendency and dispersion;  Correlation and regression analysis; Chi- square test, z-test & t-test, and Goodness-of-fit test, Confidence intervals, ANOVA,ANCOVA, MANOVA, Multiple regression analysis, Factor analysis; Discriminant Analysis.  Analysis of Variance and Co-variance Curve fitting.  Use of statistical package: SPSS or R or any other well-tested and proven packages. Presentation of data – graphical and tabular, frequency tables, histogram, frequency curves. | **Unit 3**  Processing and Analysis of Data: Scales of Measurement, Measures of Central Tendency and Dispersion, Correlation and Regression Analysis. Chi- square Test, z-test, t-test, and Goodness-of-fit test. Level of Significance and Confidence Intervals. Multiple Regression Analysis, Factor Analysis, Discriminant Analysis.  Analysis of Variance and Co-variance. Curve Fitting. Introduction to the Statistical Packages: SPSS/ R/ Excel. Validation of Data. Interpretation and Presentation of Data- Graphical and Tabular, Frequency Tables, Histogram, Frequency Curves. |
| **Unit 4**  Data collection tools: Observation - Rating scale check list; Questionnaire – Types of questions, structured and unstructured questions, Cautions regarding questions and questionnaires. Interview schedule – Types, Merits & limitations; Measurements indices, Pilot studies. Graphical presentation of data and report writing: Meaning and importance, Communally used graphics forms - Live graphs or charts. Histograms, Frequency polygons, Ogive bar charts, Pie charts & pictogram. Organization of reports. Steps in writing research reports, writing style. | **Unit 4**  Research reporting and thesis writing – Significance, Style, Different steps in the preparation – Layout, structure and Language of typical reports, Illustrations and tables, Bibliography, referencing and footnotes, Guidelines for research reporting, Style manuals – Chicago, MLA, APA etc. Online reference compilation tools: Functions & Features (Mendley, Zotero etc.)  Oral presentation – Planning, Preparation, Practice, Making presentation – Use of visual aids - Importance of effective communication – Current Trends in Library & Information Science Research. | **Unit 4**  Research Reporting and Thesis Writing: Structure, Components & Guidelines. Style Manuals. Functions & Features of Reference Management Systems. Practical Familiarity with APA Style Manual and one of the Reference Management Systems such as Mendeley & Zotero. Presentation of Research Reports: Use of Visual Aids. Importance of Effective Communication of Research. Writing Research Papers for Journals, Seminars and Conferences. Evaluation of Research Reports and Scientific Papers. Current Trends in Library & Information Science Research. |
| **Unit 5**  Report writing; Referencing style; Statistical packages | **Unit 5**  Plagiarism: Concept and Types - Citation and acknowledgement - Reproducibility and accountability. Online Plagiarism detection tools. Online Indexing Databases: Web of Science, SCOPUS etc. Search strategies and refinement techniques in online databases and e-Portals. Online data gathering Tools, Data analysis tools for research | **Unit 5**  Research Ethics-Importance, Principles/ Guidelines. Major Ethical Issues. Ethics Committees. Publication Ethics. Concept of Academic Integrity. Avoiding Plagiarism. Plagiarism Detection Tools. Intellectual Property Right, Copyright, Indian Copyright Act. Measuring Scientific Productivity: Citation Databases, Impact Factor and its variants, h-index, SNIP, SJR. Unique Author Identification Systems. |