

DEPARTMENT OF TEXTILE SCIENCE AND APPAREL DESIGN

SYLLABUS OF RESEARCH METHODOLOGY

1. Meaning of research; objectives of research; basic steps of research; criteria of good research; types of research.
2. The Research Process
 - a. Scientific approach to enquiry in comparison to native, common sense approach
 - b. Knowledge, theory and research
 - c. Role, need and scope of research in the discipline of Home Science
3. Meaning of research problem; selection of research problem.
4. Problem Formulation: Conducting Literature Review, Information Sources (Books, monographs, reviews, blogs, etc.), Information Retrieval, Role of libraries in Information Retrieval, Tools for identifying literature (digital resources and print media), Indexing and abstracting services, Citation indexes, Summarising the Review, Critical Review, Identifying Research Gap, Conceptualising and Hypothesizing the research gap.
5. Review of related literature- Meaning, necessity and sources.
6. Hypothesis- Meaning, function and types of hypothesis; Null/Alternative hypothesis
7. Variables- Meaning and types.
8. Research design: Types of research design- exploratory, descriptive, diagnostic and experimental.
9. Sampling- Meaning and types of sampling; Probability and Non-Probability.
10. Tools and techniques of data collection- questionnaire, schedule, interview, observation, case study, survey etc.
11. Statistics and its significance in research.

Data Analysis and Interpretation: Sampling, Sampling Error, Statistical Methods/Tools - Measures of Central Tendency and Variation, Test of Hypothesis- z test, t test, F test, ANOVA, Chi square, correlation and regression analysis, Error Estimation.
12. Writing Research Articles and Thesis: Data Presentation- Types of tables and illustrations, Guidelines for writing the abstract, introduction, methodology, results and discussion, conclusion sections of a manuscript. References – Styles and methods, Citation and listing system of documents. Plagiarism. Ethical considerations in Research.
13. Research Ethics: Research Ethics Committees/Institutional Review Board – Roles and Importance Intellectual Property rights – Commercialization, Royalty Reproduction of Published Material – Citation and Acknowledgement, Plagiarism- Concept and significance of plagiarism.