

RESEARCH METHODOLOGY

MEM 111

Semester: First

Credit Hour: 3

Full Marks: 75

Internal: 30

Final Exam: 45

General objectives:

- State and explain the concept of research methods which can be applied to any research studies.
- Develop an important dimension involving to research that of research methodology.

Specific objectives:

Specific objectives of this unit are:

- to provide knowledge to the students about different type of research, their process and applications.
- to familiarize the students with different types of data collection techniques and their applications.
- to develop an understanding of ethical issues and required consideration for their research studies.
- to provide skills for the selection of sampling technique, errors and proper planning different sampling methods.
- to enable the research students in developing the most appropriate methodology for their research study.

Course Content

Unit 1	Introduction Meaning and Importance of Research, Classification of Research ,Research in Engineering Functions , The Research Process, Research as a scientific Process, Issues governing Research Function, Listing and description of Steps of research.	4 hrs
Unit 2	Research Design Meaning and Importance of Research Design, Classification of Research Design, The Research Process, Variables, Hypothesis, Errors Affecting Research Design, Measurements and Scaling, Reliability and validity test of research, Pilot test, field study, Issues Governing Research Design	4 hrs
Unit 3	Development of Research Selection of research topics, Research problem vs research question, Meaning and Importance of Research Proposal, Classification of Research Proposals, Components of a Research Proposal , Manager-Researcher Contribution in Developing a Research Proposal, Evaluation a Research Proposal, The Development of Research Issues Governing Proposal	9 hrs
Unit 4	Sampling Decisions Sampling Vs. Census, Sampling Techniques, Issues Governing Sampling Decisions	4 hrs

Unit 5	Data Collection Methods Meaning, Importance and Types of Data, Methods of Data Collection, Steps of Data processing and Presentation, Various Methods of Data collection	8hrs
Unit 6	Data Reduction and Analysis Meaning and Importance of Data Reduction, Data Reduction Process, Selected Techniques of Data Analysis	5hrs
Unit 7	Formatting the report Formatting a Report, Developing the Final Draft , Preparing for Citation and Referencing Making an Oral Presentation of a Report	4hrs
Unit 8	Development of Research Proposal Meaning and Importance of research proposal ; the Development of Research Issues Governing Proposal; Writing a research report- Developing an outline; Key elements of research proposal- Objective, Introduction, Design or Rationale of work, Experimental Methods, Procedures, Measurements, Results, Discussion, Conclusion, Referencing and various formats for reference writing of books and research papers; Publications in Research journals	3 hrs.
Unit 9	Socio-Ethical issues in Research Issues governing Research Function, Incorporating Socio-Ethical Issues in Research Impact of Social Issues in Research	4 hrs

References

1. Cooper & Schindler (2004). Business Research Methods. New Delhi: Tata McGraw-Hill Publishing Co.
2. Best, John W, : Research In education, Prentice hall of India, New Delhi
3. *Wolf Howard K and P.R Pant: "Social Science Research & Thesis Writing", Research Division, Kirtipur*
4. Goode William J, and Paul K Hatt: " Methods in Social Research", Megraw Hill Kogakusha Ltd
5. Kothari , C.R, Research Methodology:, II nd revised edition, New International publisher