

Naipunnnya School of Management Cherthala



Postgraduate Department of English

**ADD-PGDE-12: CERTIFICATE IN
METHODOLOGY**

CERTIFICATE IN METHODOLOGY (ADD-PGDE-12)

Total no of hours - **30**

This comprehensive program is designed to equip learners with the essential tools and techniques needed to conduct rigorous and effective research across various disciplines. Throughout the course, participants will delve into topics such as research design, data collection methods, statistical analysis, and ethical considerations, providing a solid foundation for future academic or professional endeavors in the realm of research.

Objectives:

- Develop a comprehensive understanding of research design principles, including the ability to formulate research questions, hypotheses, and study designs suitable for various research objectives and contexts.
- Acquire proficiency in selecting and implementing appropriate data collection methods, including surveys, interviews, experiments, and observational techniques, while ensuring data quality and reliability.
- Gain practical skills in data analysis, including descriptive and inferential statistical techniques, to interpret research findings accurately and draw valid conclusions.
- Explore ethical considerations and best practices in research, including principles of research integrity, confidentiality, informed consent, and responsible conduct of research, to uphold professional standards and ethical guidelines in all stages of the research process.

Key Learning Outcomes:

By the end of the course, the students will be able to:

1. Demonstrate proficiency in designing research studies, including formulating clear research questions, hypotheses, and study designs appropriate for different research objectives and contexts.
2. Apply a range of data collection methods, such as surveys, interviews, experiments, and observational techniques, effectively to gather high-quality data while considering ethical considerations and minimizing biases.

3. Utilize various statistical techniques for data analysis, including descriptive and inferential statistics, to interpret research findings accurately and draw valid conclusions, effectively communicating results to diverse audiences.
4. Evaluate and integrate ethical principles and best practices in research, including maintaining confidentiality, obtaining informed consent, and adhering to professional standards of integrity, to ensure the responsible conduct of research and uphold ethical standards throughout the research process.

Syllabus

Module 1: Introduction to Research Methodology (6 hours)

- Overview of research methodology
- Importance of research in various disciplines
- Formulating research questions and hypotheses
- Understanding different research paradigms and approaches

Module 2: Research Design and Sampling Techniques (6 hours)

- Principles of research design
- Types of research designs (experimental, correlational, qualitative, etc.)
- Sampling techniques and their applications
- Considerations for sample size determination

Module 3: Data Collection Methods (6 hours)

- Overview of data collection methods (surveys, interviews, experiments, observations, etc.)
- Designing and implementing surveys and questionnaires
- Conducting interviews: techniques and best practices
- Experimental design and implementation

Module 4: Data Analysis and Interpretation (6 hours)

- Introduction to statistical analysis
- Descriptive statistics: measures of central tendency and variability

- Inferential statistics: hypothesis testing, t-tests, ANOVA, correlation, regression
- Data visualization techniques
- Interpreting research findings and drawing conclusions

Module 5: Ethics in Research (6 hours)

- Ethical considerations in research
- Principles of research integrity and responsible conduct of research
- Obtaining informed consent and maintaining confidentiality
- Ethical issues in data collection, analysis, and reporting
- Ethical guidelines and regulations governing research conduct

References

1. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* by John W. Creswell
2. *Research Methodology: A Step-by-Step Guide for Beginners* by Ranjit Kumar
3. *The Essentials of Political Analysis* by Philip H. Pollock III
4. *Statistics for Social Sciences* by R. Mark Sirkin
5. *Ethics in Research* by Robert A. Jonas