



Faculty of Management and Commerce

PhD Course Work Curriculum

Ph. D 101 Research Methodology

Credit 4

This is a mandatory module for every candidate undergoing doctoral study. University examination will be held for this module. Research Methodology is a hands-on module designed to impart foundational methods and techniques of research in social sciences and business management context. Research scholars would be practically exposed to the different components of research frameworks. Post attending this module, research scholars are expected to conduct disciplined research under supervision in a respective area of their preference, apply the statistical methods while analyzing data, and interpret research findings. University examination shall be held for this module.

Sr. No	Unit	Description
1	Concept of Research	1.1 Definition –Why, What and How of Research ; Significance of Research ; Scientific research and Its characteristics 1.2 Ethics in Research and Plagiarism 1.3 Skills required for conducting research
2	Introduction to Research Methodology	2.1 Selection and formulation of Research Problem; formulating the objectives, 2.2 Research Design – Need – Features – Inductive, Deductive and Development of models; 2.3 Developing a Research Plan – Exploration, Description, Diagnosis, and Experimentation 2.4 Review Hypothesis- Types and Significance – Development of Working Hypothesis, Null Hypothesis 2.5 Research Methods: Scientific method vs Arbitrary Method, Logical Scientific Methods: Pattern of Deductive – Inductive Logical process – Different types of inductive logical methods.
3	Types of Research and Research Process	3.1 Quantitative and Qualitative approach Collection of Information and evaluation; 3.2 Descriptive, Evaluative, Historical, Philosophical, Developmental, Co-relational Research, Ethnographic Research, Experimental Research, Ex-Post Facto Research, Action research 3.3 Sources of Data, Types of Data – Categorical, nominal and Ordinal

4	Statistical Approach in Research	<p>4.1 Basic concepts in statistical inference: Confidence intervals, hypothesis testing and statistical significance.</p> <p>4.2 Simple statistical applications such as t, F, Chi Square.</p> <p>4.3 Sampling techniques- concept, types (random, purposive, stratified random, probability and non-p Linear</p> <p>4.4 Regression, Intercept and Regression Coefficient. Probability).Multivariate Regression; From correlation to causation: challenges and strategies for identification of causal effects</p> <p>4.5 Statistical inference in regression- Standard Errors & statistical significance (p-values & confidence intervals)</p>
5	Research Tools	<p>3.1 Tools and Techniques of data collection for qualitative and quantitative research – Observation, interview, questionnaire, rating scale, inventory, check list, content analysis.</p> <p>5.2 Reliability and Validity of tools.</p>
6	Advanced Statistical Tools	<p>6.1 ANNOVA,</p> <p>6.2 Discriminate Analysis, Multilevel Analysis</p> <p>6.3 Structural Equation Modeling</p>
7	Data Analysis	<p>7.1 Data Processing and Analysis strategies- Graphical representation – Descriptive Analysis – Inferential Analysis- Correlation analysis – Least square method</p> <p>7.2 Data Analysis using statistical package – Hypothesis – testing – Generalization and Interpretation – Modeling.</p>
8	Hands on Exercises	To be conducted by the instructor throughout different sessions

Reading Materials

- Research Methodology: Methods and Techniques- C.R. Kothari and Gaurav Garg, New Age International Publishers 2019
- Handbook of Research Methodology- Shanti Bhushan Mishra and Shashi Alok, Educreation Publishing 2017.
- Quantitative Techniques for Managerial Decisions- Dr. U.K Srivastava, Dr. G.V Shenoy and Dr. S.C Sharma, New Age International (P) Ltd. Publishers, 2017
- Quantitative Techniques in Management- N. D. Vohra, McGraw Hill Education Education, 2017