

Ph.D. Course Work

Course Title	Research Methodology (Ph.D. Course Work)
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	<ul style="list-style-type: none"> • Prepare proposals for the research and conduct research projects.
	<ul style="list-style-type: none"> • Form research hypothesis and test it using regression analysis and suitable test criterion.
	<ul style="list-style-type: none"> • State different methods of data Collection and apply appropriate statistical tools for data analysis.
	<ul style="list-style-type: none"> • Use different procedures of data interpretation, analysis and report writing, and communicate effectively through written reports, presentations and discussion.
Module 1(Credit 1)	Introduction to research and Research Design
Learning Outcomes	After learning the module, learners will be able to
	1. Identify and discuss the role and importance of research in Economics.
	2. Understand salient features of research process. 3. Interpret different types of research design useful in economics
Content Outline	Meaning – Objectives – Types – Significance - Research Process – Formulation of Research Problem Meaning of Research Design – Types – Exploratory or formulative – Descriptive – Diagnostic – Experimental.
Module 2(Credit 1)	Hypothesis and Sample Design
Learning Outcomes	After learning the module, learners will be able to
	1) Appraise research hypothesis with its types, sources and characteristics 2) Test research hypothesis using regression analysis and suitable test criterion 3) Analyze sampling methods, sample size and sampling error
Content Outline	Meaning, types, sources and characteristics of Hypothesis. Testing of Hypothesis in regression analysis: Z test, 't' test and F test. Theory of Sampling and sampling methods, Probability and non-probability types of sampling, Sample size and sampling and non-sampling error
Module 3(Credit 1)	Sources and Methods of data Collection and Processing of Data
Learning Outcomes	After learning the module, learners will be able to
	1. Analyze different sources of data used in research and data collection methods
	2. Apply different statistical tools in research for testing hypothesis.

Content Outline	Sources of data: Primary and secondary, Primary sources of data: Observation, Interview, Questionnaire, Schedule, Case study methods. Secondary sources of data from prominent publications and government published data. Relevant statistical tools – Proportion and Percentage – Measures of Central Tendency used in research: measures of central tendency and dispersion, Correlation and regression analysis, time series analysis, Chi Square Test, ANOVA in regression model
Module 4(Credit 1)	Interpretation of data and Report Writing
Learning Outcomes	After learning the module, learners will be able to 1. Identify and discuss procedures of data interpretation, analysis and reporting. 2. Communicate effectively through written reports, presentations and discussion.
Content Outline	Meaning and technique of data interpretation, Precaution in the use and interpretation of data, Significance of research report, steps in report writing, Layout of research report, Presentation and publication, preparing of reference, quotations, footnotes, and bibliography.

Assignments/Activities Towards Comprehensive Continuous Evaluation (CCE)

References:

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- Chiang, A.C. (1986) *Fundamental Methods of Mathematical Economics*, McGraw Hill, New York.
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- Gujarati, Damodar, N. (2010) *Basic Econometrics*, McGraw Hill, New York
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- Speigal, M.R, (1992) *Theory and Problems of Statistics*, McGraw Hill Book Co., London.
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