

**Detailed Syllabus for First Semester of the Doctoral Coursework in Geography**

**Module Name:** *Research Methodology - Theoretical Aspects*

**Paper Type:** Theory

**Paper Code:**

**Course No.:** GEOG

**Total Marks: 50** (Semester Examination - 35 and Internal Assessment - 15)

**Credit:** 4 Credit Hours / week (4 x 16 teaching weeks = 64 credit hours per semester)

Figures in [ ] indicate number of credit hours allocated for the topic

**Module Evaluation: Semester Examination (35 marks):** Written examination of 2 hours duration will be held at semester end.

**Question Pattern** - Four Long-answer type questions each of 10 marks (may be split into two parts, one carrying 2 marks at most) will be set for answering any two and five semi-long answer type questions, each of 5 marks will be set for answering any three.

**Internal Assessment (15 marks):** Mode of Internal Assessment (through viva-voce / class presentation / group discussion / written examination / assignment or any other method) will be notified for chosen topic(s) during the Course.

**Unit I - Research Basics**

- 1.1 Concept of Research: Meaning and objectives of research, Research process
- 1.2 Problem Identification: Knowing and choosing the field
- 1.3 Problem Identification: Professional experience, Inference from theory, Indicative literature, Technological and social changes
- 1.4 Problem Formulation: Definition and statement of the problem
- 1.5 Problem Evaluation: Feasibility of undertaking research on concerned problem, originality and significance of the problem, Ability of the researcher to probe the problem

**Unit II - Framing the Research**

- 2.1 Identifying Research Questions
- 2.2 Hypothesis Building: Importance of an Hypothesis; Hypothesis Formulation: Richness of background knowledge, Deductive reasoning, Use of analogies in hypothesis formulation; Criteria of a usable hypothesis, Hypothesis Statements, Hypothesis Testing
- 2.3 Doing a Literature Review - Basic guidelines, Types of and Sources of Bibliographic Information
- 2.4 Citation, Bibliographic Management and Style of Referencing; Preparation of Foot notes, End notes, Glossary, Abbreviations and Acronyms
- 2.5 Ethical Issues in Research - Meaning and seriousness of Plagiarism, Types of Plagiarism, Preventing Plagiarism

**Unit III - Pursuing Geographical Enquiry**

- 3.1 Theory of Observation - Methodological issues in geographical observation, Types of geographical enquiries
- 3.2 Introduction, nature, purpose and practice of geographical data collection from the field
- 3.3 Organisation and maintenance of a Field Book containing information, observations and findings

**Unit IV - Academic Writing and Publishing**

- 4.1 Meaning and Types of Academic Writing
- 4.2 Challenges in Academic Writing; Nature of Scientific Writing - Styles and Techniques of Dissertations, Thesis, Reports and Research Papers and their Structure and Organisation
- 4.3 Preparation of Papers for Journals - Framing the Paper Structure; Writing the Abstract and Introduction; Organising and Presenting an Argument; Engaging in Academic Discussions and Debates and drawing Conclusions; Norms for successful submission
- 4.4 Dealing with Objection and Rejection
- 4.5 Importance of Revision (Review Reports, Response Sheets)
- 4.6 Norms towards Acceptance for Publication (revision, editing, proof reading and printing)

**DEPARTMENT OF GEOGRAPHY**  
**PRESIDENCY UNIVERSITY**

**Detailed Syllabus for Second Semester of the Doctoral Coursework in Geography**

**Module Name:** *Research Methodology - Techniques*

**Paper Type:** Theory

**Paper Code:**

**Course No.:** GEOG

**Total Marks:** 50 (Semester Examination - 35 and Internal Assessment - 15)

**Credit:** 4 Credit Hours / week (4 x 16 teaching weeks = 64 credit hours per semester)

Figures in [ ] indicate number of credit hours allocated for the topic

**Module Evaluation: Semester Examination (35 marks):** Written examination of 2 hours duration will be held at semester end.

**Question Pattern** - Four Long-answer type questions each of 10 marks (may be split into two parts, one carrying 2 marks at most) will be set for answering any two and five semi-long answer type questions, each of 5 marks will be set for answering any three.

**Internal Assessment (15 marks):** Mode of Internal Assessment (through viva-voce / class presentation / group discussion / written examination / assignment or any other method) will be notified for chosen topic(s) during the Course.

**Unit I: Quantitative Aspects**

- 1.1 Types of data and their sources and limitations
- 1.2 Collection of Primary Data - Concept of Questionnaire Survey
- 1.3 Sampling Techniques - Qualitative and Quantitative Variables
- 1.4 Multivariate Regression, PCA, ANOVA, Statistical Hypothesis Testing
- 1.5 Using Statistical Softwares

**Unit II: Qualitative Aspects**

- 2.1 Qualitative Approach to Inquiry: Phenomenological Research
- 2.2 Idea of Triangulation in Qualitative Research
- 2.3 Quantification in Qualitative Research
- 2.4 Grounded Theory
- 2.5 Project in handling Qualitative Analytic Software

**Unit III: Field Aspects**

- 3.1 Practice of geographical observation, data collection and interpretation techniques during the field trip
- 3.2 Stages of fieldwork: Selecting a research setting, gaining access and presenting oneself, gathering information
- 3.3 Field notes: Types, coding, analysis
- 3.4 Types of Field Observation: Participant and Non-participant, Structured and Non-structured, Empirical and Measured
- 3.5 Conducting an Interview: Framework and guidelines;
- 3.6 Techniques of Socio-economic survey: Preparation of questionnaire, interview, focus group discussion along with master table preparation
- 3.7 Mode of collecting Primary Data using Instruments
  - a. Fundamentals of Total Station Survey including data collection and computation
  - b. Use of Eco-sounder in Large Rivers
  - c. Basic Principles and Utilities of Current Meter regarding River Discharge calculation

**Unit IV: Geoinformatics Tools**

- 4.1 Aspects of Map Design: Marginal information and Map Body Presentation - Best Practices
- 4.2 Spatial Analyst Tool of ArcGis 10.0
- 4.3 Geomorphometric Analysis in Mapinfo Professional GIS

**Unit V: Preparation of Abstract, Research Proposal, Executive Summary and Assignment**

- 5.1 Framing a Research Proposal: Main Elements
- 5.2 Research Proposal Writing and Discussion Clinic