

PhD Course Work Syllabus in Geography
P.G. Department of Geography
Utkal University, Vani Vihar, Bhubaneswar
Year - 2021



NAAC: A+

Department of Geography
Utkal University
Bhubaneswar

Pre-Doctoral Course Work in Geography
P.G. Department of Geography
Utkal University, Vani Vihar, Bhubaneswar
Year-2015

The course will comprise of four papers

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| 1. Paper 1: Research Methodology | 100 Mark |
| 2. Paper-2: I.T. in Geography | 100 Mark |
| 3. Paper-3: Review of Literature | 100 Mark |
| 4. Paper-4: seminar Presentations Two | 100 Mark |

Paper-I

Research Methodology

Unit-1

- 1.1 Concept and Definition of Research, Basic Norms of a Scientific Community Salient features of students Research, Research Process Model, Selecting and Justifying a Research Topic, Source of Suggestions for Topics. Techniques for Generating Research Topics
- 1.2 The Issue Problem Identification or Statement of Problem, Rationale Scope and limitation premise, research objectives, Research Questions and Hypothesis, Development of a Research Proposal, Planning for the Research Project: Network Planning and Scheduling chart

Unit-II

- 2.1. Approaches to Geographical Research: Historical case Study, Descriptive and Experimental
- 2.2. Methods of Geographical Research: Ex-post factor, Laboratory Experiments, Field Experiments, Field Study, Survey Research Evaluation Research and Action Research
- 2.3. Research Methods Physical Sciences

Unit-III

- 3.1. Developing a Coordination Schema (Assembling the Components of a research e.g., Objectives, Parameters, Variables and Values), Utility Format, Fitting, Approach, Steps and Construction, Sampling Techniques Basic Considerations, Sampling Frames, Sample Size Areal Sampling Methods.
- 3.2. Methods of Data Collection: -Source (Primary and Secondary), Types Reconnaissance, Observation, Survey, Interviews, Group Discussion, Key Informants, Methods for Developing a Structured Questionnaire and Guideline for a Questionnaire Survey, Rapid Rural Appraisal (Background, Principles, Application, Elements, Example, Checklist and Biasness) and Participatory Rural Appraisal (Concept, Background, Principles Application, Selected Methods, Techniques and Tools).

Unit-IV

- 4.1. Statistical Manipulation of Data Summaries (Frequency Distribution, Central Tendency and Measures of Dispersion)
- 4.2. Statistical Manipulation of Data: Comparison: Covariance, Correlation Analysis, Regression Analysis and Chi-square

Unit-V

- 5.1. Literature Review: Finding the Literature (Types Searching Skills etc) Managing the literature (Keeping Track, Annotating, Summary and Critical Comment) Using the Literature (Exploring a Topic, developing a Research Question, articulating a Rationale and Designing Method) The Formal Literature Review (Purpose, Coverage, The writing Process Style and Tone)
- 5.2. Executing the Research: Avoidable Problems, Unavoidable, Working with Supervisor, Positive view of Research Progress, Presentation of Research: Report Structure, Style

of Writing, Process and Content Reproducing the Report, Preparing for oral Examination.

Paper – III (100 Marks)

I.T. in Geography

Unit -1

- Fundamentals of computer assisted cartography.
- Fundamentals of computer hardware, software, concept of folders and files (Tiff...)
- Understanding MS office, Excel, power point.
- Geographical data processing using excels.

Unit-II

- Use of satellite Data in geographic analysis.
- Introduction to Erdas Imagine software/IDRISI. ,
- Data types, resolutions, limitations.
- Supervised and unsupervised classification in Image processing.
- Digital image processing - methods, DTM & OEM.
- Use of NDVI.

Unit-III

- GIS & GPS in Geography.
- Fundamentals of GPS - Data collection and mapping, surveying using GPS.
- GIS software - ArcGIS & its spatial features and its components (Arc Map, Arc view. ArcTNT).
- Application in geomorphology / cartography /urban geography / Environment / disaster.

Unit-IV

- SPSS in Geographical data analysis.
- Introduction to SPSS, it's components
- Data processing, analysis and mapping using SPSS.

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| 1. Term Paper Based on Literature Review | |
| a. Term Paper Preparation | 30 Marks |
| b. Presentation and Viva-Voce | 20 Marks |
| 2. Books and Article Review and Viva-Voce | |
| a. Books (One National and One International) | 15 Marks |
| b. International Journal Articles (Two Number) | 20 Marks |
| c. Referred Indian Journal Articles (Two Number) | 15 Marks |

Paper IV (100 Marks)

Development of Research Proposal and Presentation

All the students are required to submit their research proposal and subsequently present the same in the format given below.

1. Issue/Background Information
3. Problem Statement
4. Objectives
5. Rationale
6. Methodology
7. Coordination Schema
8. Literature Review
9. References.