**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

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**

**Objective:**

To strengthen the understanding of research methods applied in social sciences among the students.

**Learning Outcomes:**

After the completion of course, the students will have ability to:

1. To create a bold foundation for scientific research methodology.
2. Know the fundamentals of social science research and research process model
3. Understand various aspect of conducting preliminaries of a scientific research
4. Grasp the techniques of data collection and compilation
5. Prepare systematic literature review and plagiarism

**Course Content:**

**Unit-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
	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**

* 1. Approaches to Geographical Research: Historical case Study, Descriptive and Experimental
	2. Methods of Geographical Research: Ex-post factor, Laboratory Experiments, Field Experiments, Field Study, Survey Research Evaluation Research and Action Research
	3. Research Methods Physical Sciences

**Unit-III**

* 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.
	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**

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

**Unit-V**

* 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)
	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**

**Objective**:

To highlight the significance of information technology in geographical studies.

**Learning Outcomes**:

After the completion of course, the students will have ability to:

* 1. Have comprehensive understand of GIS for the construction of maps and their use the development planning
	2. Use various statistical software for conducting and carrying out geographical research activities.
	3. Apply remotely sensed information in geographical domain.

**Course Content**:

**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-ll**

* Use of satellite Data in geographic analysis.
* Introduction to Erdas Imagine software/IDRlSl. ,
* 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.

**Paper III (100 Marks)**

**Term Paper and Book Reviews**

**Objective:**

To involve the students into the process of reviewing journal articles and documents related to the area of research which will further help them with the preparation of research proposal.

**Learning Outcomes**:

After the completion of course, the students will have the ability to:

1. Gain competence on idea of the planning phase in the research process model,
2. Prepare research proposal for any research topic with sufficient significance.
3. Document their literature review for better understanding of their selected topic.

**Course Content**:

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

**Paper IV (100 Marks)**

**Development of Research Proposal and Presentation**

**Objective:**

To make a researcher present his/her idea into the most scientifically accepted format before involving the research agenda.

**Learning Outcomes:**

* + 1. Any research idea needs a certain level of acceptance among the various scientific norms and acceptance in front of the scientific community. To fulfill that a researcher has to prepare his/her idea into a scientifically accepted format before pursuing the research.
		2. This activity will help the students to be acquainted with the proposal preparation for any research projects which he/she wants to carryout in future.

**Course Content:**

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

* + 1. Issue/Background Information
	1. Problem Statement
	2. Objectives
1. Rationale
2. Methodology
3. Coordination Schema
4. Literature Review
5. References.