

**SEMESTER – I (CORE COURSES)**

**GEOG.802:**

**ADVANCED RESEARCH METHODS**

**3(3-0)**

**Course Objectives**

This course examines in-depth the process of research in geography and regional planning for the doctoral degree and prepares the students for independent research work. Students learn a structured approach of the research process, which includes defining the research topic, the research questions, conducting a literature review, building a conceptual model as well as designing the research methodology: collecting and representing data.

This course also seeks to involve students in developing their skills and understanding of the design and data collection as a foundation for improving their research approaches and outputs. The aim of this course is to provide an excellent platform that not only serve the development of the research proposal but also provide the follow up stages of the research process culminating in the 'preparation of synopsis/proposal'.

**Learning Outcomes**

On completion of this course, the students will be able to:

- Introduce social and geographical research, and identify the main phases of research.
- Formulate the research questions and objectives, research hypotheses, conceptual model, and main variables and describe the proper research methodology that fits the research questions and objectives;
- Design the questionnaire and interview as instruments for data collection.
- Recognize the ethical dimension of conducting research.

**Course Outline**

**1. Social and Geographical Research**

- Science and Scientific Research
- Social and Geographical research: scope and application
- Ideas, concepts and Theories in research
- Deductive and inductive approaches

**2. The Research Process**

- Conceptualization: topic selection, problem statement, research question and research objectives, research hypothesis, conceptual framework and measurement tools
- Operationalization: data collection, analysis and interpretation, conclusions and recommendations
- Review literature: Literature assessment, analysis, selection and synthesis and use of review literature matrix

**3. Types of Research Methods and Research Designs**

- Research Types: Qualitative, quantitative and mix-methods
- Research Design: Definition and Explanation
- Action Research Design
- Case Study Design
- Causal Design
- Cohort Design
- Cross-Sectional Design
- Descriptive Design
- Experimental Design
- Exploratory Design
- Historical Design
- Longitudinal Design

- Meta-Analysis Design
- Observational Design
- 4. Data Measurement**
  - Unit of analysis, participants and target groups
  - Parameters, variables and levels of measurement
  - Coordination schema
  - Construction of questionnaire and interviews
  - Validity and reliability
  - Hypothesis testing
- 5. Sampling Design**
  - Sampling methods and procedures
  - Sample size
- 6. Types of Data and Collection Methods**
  - Qualitative and Quantitative Data
  - Primary and Secondary Data
  - Literature review and article analysis
  - Surveys, Interviews and Observation
  - Group Discussion
  - Key Informants, Expert Judgment and Delphi Method
  - Rural rapid appraisal (RRA) and Participatory rural appraisal (PRA)
- 7. Data Analysis**
  - Qualitative data analysis
  - Quantitative data analysis
- 8. Ethical Considerations in Research**
  - Ethical aspects of collecting data
  - Acquisition of ethical approval for conducting research involving human participants
  - Research Ethics Review Committee (RERC) or Institutional Review Boards (IRBs)
  - Plagiarism and intellectual property
  - Disclosing of potential conflict(s) of interest.
- 9. Synopsis and Thesis Writing**
  - Essentials of synopsis and its preparation
  - Format of chapters in thesis
  - Preparing research article and publication

### **Recommended Books**

1. Floyd J. Fowler, Jr (2013) “Survey Research Methods”, 5<sup>th</sup> edition, Sage Publications.
2. Earl Babbie, (2010) “The Practice of Social Research”, 12<sup>th</sup> Ed., Belmont, CA: Thomson-Wadsworth.
3. World Medical Association. (2008) “World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects”, [www.wma.net/e/poliy/b3.htm](http://www.wma.net/e/poliy/b3.htm).
4. Marczyk, G., DeMatteo, D., Festinger, D. (2005) “Essentials of Research Design and Methodology”, John Wiley & Sons.
5. I. Brace: (2004) “Questionnaire Design”, Kogan Page.
6. J. W. Creswell (2002) “Research Design: Qualitative, Quantitative and Mixed Methods Approaches”, Sage Publications,
7. P. S. Levy and S. Lemeshow (1999) “Sampling of Populations: Methods and Applications”, 3<sup>rd</sup> edition Wiley-Inter-science.
8. Weber and I. P. Tiwari (1992) “Research and Survey Format Design: An Introduction”, AIT, Thailand.

### **Recommended Journals**

- *Journal of Mixed Methods Research*
- *International Journal of Social Research Methodology*
- *Sociological Methods & Research (SAGE)*
- *IETE Journal of Research (Taylor & Francis)*