

**Department of Psychology**  
**Hemvati Nandan Bahuguna Garhwal University, Srinagar Garhwal**  
**Uttarakhand**  
**(A Central University)**

**Pre- PhD Syllabus**

<b>Core course 1</b>	<b>Research Methodology</b>	<b>4</b>
<b>Credits</b>		

<b>Core course 2</b>	<b>Research Publication Ethics</b>	<b>2+1=3</b>
<b>Credits</b>		

**And Computer Applications**

<b>Elective course 1</b>	<b>Quantitative Methods</b>	<b>4</b>
<b>Credits</b>		

<b>Elective course 2</b>	<b>Scientific Writing in Psychology</b>	<b>4</b>
<b>Credits</b>		

<b>Elective course 3</b>	<b>Paper Presentation</b>	<b>4</b>
<b>Credits</b>		

**Elective course (any 2)**

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<b>Total</b>		<b>15</b>
<b>Credits</b>		

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# Core course 1

## Research Methodology

4 Credits

### Section –A

#### Principles of Research Methodology

1. Nature of scientific research, Phases of scientific approach.
2. Selection of research problem, formulation of null and directional hypotheses, Variables and their control
3. Sampling: probability and non probability and sampling.

### Section –B

#### Social Research

1. Observation: Observation as an instrument. Observation with and without intervention, participant observation, recording behaviors. Problems in the conduct of observation research.
2. Questionnaire: Questionnaire as an instrument, steps in preparing a test, guidelines for effective wordings of questionnaire and for general format.
3. Interview: Interview as an instrument, Advantage and limitations, guidelines for successful interview.

### Section –C

#### Experimental Designs

1. Basic elements of research design. Types of Experimental Design.
2. Between group design (Randomize groups), Matched grouped design, Factorial design.
3. True Experimental Design: Pre-Post design.

#### References:

1. Broota K.D-Experimental Design.
2. Winer B.J.-Statistical Principles Experimental design. McGraw Hill
3. Kapplin - Design and Analysis: A Researchers Handbook, prentice Hall.

## Core course 2

### Research Publication Ethics and computer application

2+1= 3 Credits

#### (A) Research and Publication Ethics

Course Code: CPE- RPE

##### Overview

- This course has total 6 units focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools will be introduced in this course.

##### Pedagogy:

- Class room teaching, guest lectures, group discussions, and practical sessions.

##### Evaluation

- Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of course.

##### Syllabus in detail

##### THEORY

- **RPE 01: PHILOSOPHY AND ETHICS (3hrs.)**
  1. Introduction to philosophy: definition, nature and scope, concept, branches.
  2. Ethics: definition, moral philosophy, nature of moral judgments and reactions.
- **RPE 02: SCIENTIFIC CONDUCT (5hrs.)**
  1. Ethics with respect to science and research.
  2. Intellectual honesty and research integrity.
  3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP).
  4. Redundant publications: duplicate and overlapping publications, salami slicing.
  5. Selective reporting and misrepresentation of data.

- **RPE 03: PUBLICATION ETHICS (7hrs.)**
  1. Publication ethics: definition, introduction and importance.
  2. Best practices/ standards setting initiatives and guidelines: COPE, WAME, etc.
  3. Conflicts of Interest.
  4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types.
  5. Violation of publication ethics, authorship and contributor ship.
  6. Identification of publication misconduct, complaints and appeals.
  7. Predatory publishers and journals.

## **PRACTICE**

- **RPE 04: OPEN ACCESS PUBLISHING (4hrs.)**
  1. Open access publications and initiatives.
  2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies.
  3. Software tool to identify predatory publications developed by SPPU.
  4. Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.
- **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**
  - A. Group Discussions (2hrs.)**
    1. Subject specific ethical issues, FFP, authorship.
    2. Conflicts of interest.
    3. Complaints and appeals: examples and fraud from India and abroad.
  - B. Software tools (2hrs.)**

Use of plagiarism software like Turnitin, Urkund and other open source software tools

- **RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)**

- A. Databases (4hrs.)**

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

- B. Research Metrics (3hrs.)**

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score.
2. Metrics: h-index, g index, i10 index, altermetrics.

## **(B) Computer Applications**

**1 Credit**

### **Unit 1: Basic Computer and Internet Fundamentals:**

**Computer Fundamental:** Structure of the Computer, Processing Devices, Memory Devices, Storage Devices, System Software, Application Software, Computer Data, Input/ Output Devices, Monitors.

### **Unit 2: Presentation Skills with MS office and Multimedia:**

**Introduction to MS office:** MS word, Toolbox, Menus, Editing a moment, previewing documents, Printing documents, Mail merge.

**MS Power point:** Starting and exploring power point menus (Insert, Format, Tools, Slideshow, Window, Help option) and formatting slides

**MS Excel:** Creating worksheets, entering data into worksheet, heading information

### **Unit 3: Research Application Software:**

Introduction to SPSS: toolbars, menus, Data coding, Entry and checking, measurement and descriptive statistics, formatting printing and exploring result.

References:

1. Basic of computer by Peter Norton
2. Basic of computer by P.K. Sahani
3. Introduction to SPSS by BPB Publication
4. Microsoft office 2000 complete, BPB Publication.

**Elective course 1**  
**Quantitative Methods**

**4 Credits**

**Section –A**

**Parametric Tests**

1. Significance of the difference between two means: independent and correlated. One tail and two tail test. Type 1 and Type 2 error
2. Linear Correlation: Meaning and types, Rank difference and Product moment Method.
3. ANOVA and Analysis of co-variance (ANCOVA).

**Section –B**

**Non Parametric Test**

1. Chi square test for one sample and for two independent samples.
2. Sign test
3. Median test

**References:**

1. Lomex. R.G (2001)-an introduction to statistical concepts for education and Behavioral Science.
2. Lewis Beak N.M.-Data Analysis An introduction.
3. Garret –Statistics in Psychology and Education.

## **Elective course 2**

# **Scientific Writing in Psychology**

**4 Credits**

### **Objectives:**

- To critically understand the process of scientific writing – its purpose and communication.
- To enable the student to practically engage with scientific writing through writing of a research paper.
- To engage with the issue of research ethics in psychology as located in complex emerging realities.

### **Course Contents:**

#### **1. How to Read Sources Critically:**

- 1.1. Looking for biases in assumptions;
- 1.2. Coherence between theory and methodology;
- 1.3. Critical analysis of the sufficiency of ‘evidence’;
- 1.4. Different types of sources and challenges associated with them (e.g., newspapers, unpublished documents, internet sources etc.)

#### **2. Communicative Writing:**

- 2.1. Writing with conceptual coherence;
- 2.2. Choice of a writing style appropriate for the topic of research (e.g., qualitative and quantitative research);
- 2.3. Learning to write for a different kinds of public/audience; Clarity and grace in writing style.

#### **3. Format Guidelines (APA and other formats):**

- 3.1. General document format;
- 3.2. Crediting sources and in-text citations,
- 3.3. References, headings, word usage and unbiased language etc.

#### **4. Ethics in scientific writing:**



- 4.1. The practice of active‘ or positive‘ ethics in increasingly complex world;
- 4.2. Intellectual Honesty in writing;
- 4.3. Copyrights and permissions

**Readings:**

American Psychological Association. (2009). Publication manual of the American Psychological Association (6th edition). APA: Washington, D.C.

Knapp, S.J. (Editor in Chief). (2012). APA Handbook of Ethics in Psychology. APA: Washington DC

Maher, B. (1978). A reader‘s, writer‘s, and reviewer‘s guide to assessing research reports in clinical psychology. *Journal of Consulting and Clinical Psychology*, 46(4), 835-838.

Williams, J.M. (1990). *Style: Toward clarity and grace*. Chicago: University of Chicago Press.

**Course Transaction:** The Ph.D. scholar engages with the course by completing assignments pertaining to different units and writing a term paper expected to be a part of the Ph.D. coursework. The different aspects of scientific writing and awareness of ethical issues in psychology practice and research are sought to be incorporated in the research process, writing style and presentation of the paper.

## **Elective course 3**

### **Paper Presentation**

**4 Credits**

The students will study the literature pertaining to the area of their research topic and present a comprehensive paper describing the constructs, theories and relevant literature.