BAREILLY INTERNATIONAL UNIVERSITY

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Course Work - Ph. D.

Syllabus

Paper-I (100 Marks)

Research Methodology including Computer Application,

Research Publication & Ethics (Code – 91005)

Credits : 04
Hrs.   : 60

UNIT-I

Research Methodology

Introduction and Research Design: Nature and objectives of research. Methods of research: Historical, Descriptive and experimental, research Process, research approaches, criteria for good research. Meaning of research design, need of research design, features of good design, different research design and basic principles of experimental design, design of experiment.

Data Collection and Analysis: Types of data, Methods and techniques of data collection, Primary and secondary data, Meta analysis. Historical method, content analysis, device use in data collection. Pilot study and pretest of tools. Choice of data collection method. Sampling and sampling Errors-Type-I Error-Type-II Error.

UNIT-II

Processing and analysis of data: Measures of Central Tendency. Measures of Dispersion. Measure of Variation. Measure of Central Tendency vs measures of Dispersion, Normal Distribution, Skewness and Interpretation, Correlation and Regression: Types of Application. Chi - Square Test: Its purpose and use.

Paper Writing and Report Generation: Basic Concept of papers/Thesis Writing and report generation, writing research abstract, Introduction, Review of literature, Result, conclusion, concept of Bibliography, and References, Significance of report writing. Steps of report writing, types of research reports. methods of presentation of report. Format of publication in research general.

UNIT-III

Computer Application

Application of computer in research, generating Chart/Graphs in Microsoft excel, Power Point Presentation. Web search: Introduction to internet, use of internet and WWW. Using Search Engine like Google Yahoo etc.

Computer Fundamentals: Computer Terminology and basics, Block Diagram of computer. Input/output: Input devices- keyboard, mouse, touch screen. Output devices-Printers and its type, scanner, computer memory, computer generation and classification. Types of Software's, OS, Types of OS some basic terms related to windows OS, computer networks, LAN, MAN, WAN.

Introduction to word processing: Research publishing tool - M.S. word, some basic terms- toolbar, format bar, status bar, creating, editing and saving a word document. Creating a research paper, use of Auto-text, Auto correct, Spelling and Grammar tool, creating a cover letter, table related operation, adding graphics, Mail Merge.

UNIT-IV

Introduction to presentation: Presentation to - M.S. Power point, features and function creating presentation, master page, putting animation, transitions, inserting animated pictures, customizing presentation showing presentation, insert image, sound, video, chart, table, seminar presentation.

Application of Internet in research: INFLIBNET, Use of Internet sights (DOAJ), Use of E Journals, Use of E-library, use of EBSCO HOST online database of Academic Libraries. Literature survey using web, website, handling research engines, Anti Plagiarism software, Virus and its types.

UNIT-V

Research & Publication Ethics

Description:
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.

Course Contents

- **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 the course.

- **Course structure:** The course comprises of six modules listed in table below. Each module has 4-5 units.

Modules	Unit Title	Teaching Hours
Theory		
RPE 01	Philosophy and Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
Practice		
RPE 04	Open Access Publication	4
RPE 05	Publication Misconduct	4
RPE 06	Database and Research Metrics	7
	Total	**30**

Syllabus in Detail

THEORY

- **RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**
  1. Introduction to philosophy: definition, nature and scope, concept, branches
  2. Ethics: definition, moral philosophy, nature of moral judgements and reactions

- **RPE 02: SCIENTIFIC CONDUCT (5 hrs.)**
  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 (7 hrs.)**
  1. Publication ethics: definition, introduction and importance
  2. Best practices *I* 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

UNIT-VI

PRACTICE

- **RPE 04: OPEN ACCESS PUBLISHING (4 hrs.)**
  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 (2 hrs.)
  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 (2 hrs.)
  Use of plagiarism software like Turnitin, Urkund and other open source software tools

- **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**
  A. Databases (4 hrs.)
  1. Indexing databases
  2. Citation databases: Web of Science, Scopus, etc.

  B. Research Metrics (3 hrs.)
  1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
  2. Metrics: h-index, g index, i10 index, altmetrics

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