GALGOTIAS UNIVERSITY

Uttar Pradesh

CREATING KNOWLEDGE

3.4.1

1. Inclusion of Research Ethics in the Research Methodology Course Work

Galgotias University

Plot No. 2, Yamuna Expressway,
Opposite, Buddha International Circuit,
Sector 17A, Greater Noida,
Uttar Pradesh 203201, India

GALGOTIAS UNIVERSITY

	L	T	P	C
RME 701 **RESEARCH METHODOLOGY**	3	0	0	4

Version No   **1.1**

Prerequisite   Research Aptitude

Objectives: **Objectives of this course include:**

a) To make students familiar with the quantitative techniques
b) To formulate a research problem and translate it into an empirical step-by- step approach for working with data
c) To practice computational techniques required in research for Presentation and Analysis of research data.

Expected Outcome: Upon completion of this course, the student shall be able to:

a) Use statistical packages required for their research
b) Formulate research problem
c) Use computational techniques for presentation and analysis of data
d) Write research report

Unit I: Introduction to Research : Methodology and Method, Types of research- Descriptive vs. Analytical, Applied Quantitative vs. Qualitative, Conceptual vs. Empirical, Procedures in research, Concept of Interdisciplinary Research, Literature survey, Identification of the problem, Experimental methods, Quasi-experimental studies , Type of surveys- CATI, CAPI, Mail, Email, Face-to-face, Questionnaire, Discourse analysis, Evaluation of Research.

Unit II: Sampling and Analysis : Primary and secondary data, Collection and validation, Methods of sampling- Simple random Stratified random sampling and Systematic sampling, Attitude Measurement- land Scales, Scaling Deterministic attitudes, Measurement models, Summative models.

Unit Ill : Experimental design and Hypothesis : ' Factorial experimental design, Designing experiments, Basic principles-replication, randomization, blocking. Single Factor Experiment: Hypothesis design, Hypothesis testing using z- test, t-test, ANOVA etc., Analysis of Variance Components (ANOVA) for fixed effect model, Sum of squares of treatments (SST), Sum of squares of error (SSE), Degrees of freedom, Confidence interval, ANOVA for random effects model, Model adequacy checking.

Unit IV: Computer Application : Introduction to spread sheet application, Features and functions, Using formulas arid Features for Statistical data analysis, Generating charts/ graph and other features, Power Use of software for statistical analysis such as SPSS,Scilab/Matlab, MS-Excel.

Unit V: Research Report : Type of research report- contents, Steps in drafting, Editing and evaluating the final draft, tables, text, quoting of reference and bibliography, Use and format of appendices- indexing, presentation of research report, Research ethics, plagiarism

Recommended Books

1. Kothari, C.R., Research Methodology (Methods and Techniques). New Age Publisher

2. Fundamentals of modern statistical methods By Rand R. Wilcox

3. Design and Analysis of Experiments, Douglas C. Montgomery, 7111 Edition, John Wiley & Sons, Inc.

GALGOTIAS UNIVERSITY

RPE-701   Research and Publication Ethics (RPE)   **L T P C**
                                                                    2 0 0 2
                                                            TOTAL: 30 Hours

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 the course.

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

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.)

1. Use of plagiarism software like Tumitin, Urkund and other open source software tools

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

Databases (4 hrs.)

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

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, altimetrics.