

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

Pre-registration Credit Course for Ph. D. Program in all faculties (February,2021)

Course Title: Ph.D. Paper I: Research Methodology and Research Publication Ethics (RM - RPE)

Course Code: PHD 001: RM-RPE Paper I

The course is primarily open to all scholars enrolled for Ph.D. program in the Faculty of Science and Technology, Humanities, Interdisciplinary studies, Commerce and Management as per UGC guidelines.

Course Level: The course has 2 Credits for Research Methodology (RM) and 2 Credits for Research Publication Ethics (RPE). The scholars completing the Pre-registration Credit Course RM-RPE Paper I shall be consider eligible to start the practical research work on the approved topic in the subject.

Overview: This Pre-registration Credit Course for Ph. D. program has 2 sections; Section I encompasses Research Methodology with 5 units and Section II includes Research Publication Ethics (RPE) with 4 units. Both sections focus on basic aspects of research philosophy, ethics, integrity and publication ethics. The detail core curriculum for this course is designed as per UGC to introduce research methodology, research misconduct and predatory publications as well as indexing, research matrices and plagiarism tools.

Learning objectives: The course will help to ensure that the scholars are able to:

- Demonstrate knowledge pertinent to the role of research in all disciplines of science, humanities, commerce and management and interdisciplinary.
- Critically analyze and interpret the results of scientific outcome,
- Evaluate its limits and possibilities with respect to knowledge in the research and its implementation.
- Improve the teaching learning process with the help of research

Learning outcomes: The scholars will be able to:

- Identify and describe methods within the philosophy of science and problems concerning observation, scientific explanations and rationality.
- Acquire an overview of important characteristics within research, development and implementation.
- Acquire various skills of presenting arguments and results of scientific research.

Pedagogy: The teaching methods will be Lectures through online/offline mode. Total 60 lectures of 60 minutes duration shall be conducted.

Mode of instruction: The medium of instruction for Pre-registration Credit Course shall be **English** in case of Faculty of Science and Technology and Faculty of Humanities (Law) and **Marathi** in case of Faculty of Commerce and Management, Faculty of Humanities and Faculty of Interdisciplinary studies.

Examination: The examination will be conducted at the end of the **RM-RPE Paper I** course through online mode. The pattern of examination for **RM-RPE Paper I** shall remain Multiple Choice Question (MCQ) of 100 marks.

Details of curriculum: Pre-registration Credit Course for Ph. D. program in the Faculty of Science and Technology, Humanities, Interdisciplinary studies, Commerce and Management

PHD- 001: RM-RPE Paper I: Research Methodology (RM) and Research Publication Ethics (RPE)

Section I : Research Methodology (RM); 2 Credits

Unit	Unit Title	Topics to be covered
I	Basics of research and research types	Research objectives, Scientific research, Importance of research methodology, Good Research Practices (GRP), Types of research and methods, surveys, case studies, Experiments and field studies, etc.
II	Review of Literature and research	Basic Concept and its need, literature search, types of literature review, review of research, sources, synthesis process, planning of review and documentation
III	Research design	Process, identification and Formulation of problem, Hypothesis, Tools of research
IV	Data analysis and interpretation	Editing, Coding, Transcription, Tabulation, Introduction to Analytical/Statistical software (SPSS, MINITAB, MATLAB) and presentation of data (Graphical)
V	Statistical analysis and report writing	Measures of central tendency, dispersion and Association/Relationship, Variance, Regression and Correlation analysis, Hypothesis testing and Test of significance, Research paper and thesis writing

Section II: Research Publication Ethics (RPE); 2 Credits

I	Research ethics and scientific conduct	Introduction to research philosophy and concept of research ethics, Ethical aspects in science and research, Intellectual honesty, research integrity, Scientific misconducts (Falsification, Fabrication, Plagiarism), Redundant publications (Duplicate, overlapping and Salami slicing), Selective reporting and misrepresentation of data
II	Publication ethics	Concept of publication ethics and its significance, Best practices and guidelines (COPE, WAME, etc.), Conflict of interest, Publication misconduct: Concept, problems and types Violation of publication ethics, authorship and contributorship Identification of publication misconduct, complaints and appeals
III	Predatory and open access publication	Predatory publishers and journals, Open access movement and publications, SHERPA/RoMEO tools to check copyright and self-archiving policies, Journal finder/Journal suggestion tools (JANE, EJF, SJS), Group discussion on publication misconduct
IV	Quality parameters and practices	Copy Rights and Intellectual Property Rights (IPR), Plagiarism Check: Software tools (TURNITIN, URKUND, etc.) practice Databases (Indexing, Citation) and Research Metrics: h-index, g-index, i-10 index, Impact factor, SNIP, SJR, IPP, Cite Score,

References:

1. Kothari, C.R. (2014) Research Methodology: Methods and Techniques, 2nd edn., New Age International Publishers, New Delhi.
2. Best, J. W. and Kahn, J. V. (2006) Research in Education, 10th edn., Pearson Publication, New Delhi.
3. Koul, L. (2019) Methodology of Educational Research, 5th edn., Vikas Publ., New Delhi (ISBN- 9789353386368)
4. Garrett, H.E. (2005) Statistics in Psychology and Education, Paragon International Publishers, New Delhi
5. Kambadur, M., Ghosh, A. and Singhvi A. K. (2019) Ethics in Science Education, Research and Governance, Indian National Science Academy, New Delhi (ISBN: 978-81-939482-1-7)
6. Best Practice Guidelines on Publishing Ethics(2014), A Publisher's Perspective, 2nd edn., John Wiley & Sons, Ltd.
7. Chaddah, P. (2018) Ethics in Competitive Research: Do not get Scooped; Do not get Plagiarized, ISBN-978-9387480865
8. National Academy of Sciences, National Academy of Engineering and Institute of Medicine (2009) On Being a Scientist: A Guide to Responsible Conduct in Research, 3rd edn., National Academies Press.
9. Beall, J. (2012) Predatory Publishers Corrupting Open Access, Nature, 489(7415):179.
10. Bird, A. (2006) Philosophy of Science, Routledge.
11. Software Manuals SPSS, MINITAB, MATLAB
12. UGC syllabus for Research and Publication Ethics, D.O. no. F.1-1/2018 (Journal/CARE), Dec., 2019