

Research Methods/Tools/ Writing (RTW) Course 4a: Techniques of Research Writing

Structure 3: PG Curricular Structure with Research only

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Prerequisite of the course (if any)
		Lecture (15 Hours)	Tutorial (00 Hours)	Practical (30 Hours)		
RTW 4a: Techniques of Research Writing	2	1	0	1	NIL	NIL

Course Objectives:

- To familiarise students with the structure and components of research papers in both theoretical and empirical statistical studies.
- To develop proficiency in using professional document preparation tools such as LaTeX, Overleaf, and Beamer for writing and presentation.

Course Learning Outcomes: After successful completion of this course, the students will be able to:

- Explain and distinguish the structure of theoretical and empirical research papers.
- Create and format professional-quality manuscripts using MS Word, LaTeX, Overleaf, and PowerPoint.
- Apply reference management tools like Mendeley and BibTeX.
- Use SQL for basic data organisation and management, ensuring structured, reliable, and reproducible data handling in research.
- Evaluate academic integrity by identifying plagiarism, fabrication, and falsification.

Unit I (7 hours)

Structure of a generic research paper in theoretical and empirical studies, respectively.

Unit II (8 hours)

Article writing using LaTeX, Overleaf, and Beamer for content presentation. MS Word, PowerPoint.

Unit III (7 hours)

Use of Mendeley and BibTeX for referencing. Data management using SQL.

Unit IV (8 hours)

Plagiarism, Fabrication and Falsification: Journal and research ranking matrices.

Essential readings:

1. Creswell, J.W. and Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, SAGE Publications.
2. Lamport, L. (1999). *LATEX: A Document Preparation System*, Addison Wesley.
3. Lipson, C. (2018). *Doing Honest Work in College: How to Prepare Citations, Avoid Plagiarism, and Achieve Real Academic Success*, University of Chicago Press.

Suggested Readings:

1. Booth, W.C., Colomb, G.G. and Williams, J.M. (2016). *The Craft of Research*, University of Chicago Press.
2. Coronel, C. and Morris, S. (2019). *Database Systems: Design, Implementation, and Management*, Cengage Learning.
3. Kopka, H. and Daly, P.W. (2003). *A Guide to LaTeX: Document Preparation for Beginners and Advanced Users*, Addison Wesley.
4. Van Emden, J. and Becker, L. (2016). *Presentation Skills for Students*, Palgrave Macmillan.

List of Practicals:

1. Preparing academic documents and presentations using LaTeX/Overleaf, Beamer, MS Word, and PowerPoint.
2. Managing references using Mendeley and BibTeX.
3. Performing basic data management tasks and queries using SQL.
4. Understanding and identifying issues related to plagiarism, fabrication, and falsification in research.
5. Exploring journal and researcher ranking metrics.