SKILL BASED COURSE
SEC FN-102 SCIENTIFIC WRITING

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
SBC FN 102 Scientific Writing	**2**	**0**	**0**	**2**	As per admission	**Nil**

Learning Objectives

- Introduce students to diverse forms of scientific writing, including research articles, theses, and reviews.
- Equip students with skills to write publishable scientific research articles.
- Train students in managing references using tools like Mendeley, Zotero etc.
- Develop skills for effective communication of scientific findings.

Learning Outcomes

The students would be able to:

- Write clear and structured scientific documents adhering to standard formats and ethical guidelines.
- Effectively use reference management and data visualization tools for scientific writing.
- Communicate scientific information to both academic and general audiences through various formats.
- Critically evaluate and improve scientific manuscripts using proofreading and peer-review techniques.

PRACTICAL
(Credits 2; Hours 60)

1. **Introduction to Scientific Writing: (1 week)**

   Forms of scientific writing: Theses, technical papers, reviews, manuals; Key elements of scientific articles; Basics of technical writing
   Assignment : Select a published scientific article and condense it into a concise abstract (1/10th of the original length)

2. **Language and Structure in Scientific Writing: (1 week)**

   Importance of clarity, choosing the right words, sentence structure, tenses, active vs. passive voice; Paragraph structuring, punctuation, and logic flow; Précis writing
   Assignment : Rewrite a complex scientific paragraph to make it clearer and more concise without losing essential details.

3. **Using Tools and Resources for Scientific Writing: (2 weeks)**

   Web-based search engines, using authentic sources; Reference management tools (e.g., Mendeley, Zotero)
   Assignment : Create a detailed review of an instrument, technique, or technology used in Food and Nutrition research.

4. **Visual Communication in Science: (2 weeks)**

   Creating tables, graphs, and figures; Using MS Office, Excel for data, and creating graphs/tables; Developing explanatory artwork and PowerPoint presentations; Designing scientific posters.
   Assignment : Create tables and graphs using a given set of data

   Assignment : Design a scientific poster on a current issue in food science and nutrition using assignment 4

5. **Writing for General Audiences (2 weeks)**

   - Science writing for the general public.
   - Differences between technical writing and science communication.
   - Writing science news and popular articles

   Assignment : Convert the review (Assignment 3) into an article targeted at a general audience.

6. **Academic Writing – Structure and Ethics (2 weeks)**

   - Components of scientific papers: Title, abstract, introduction, methods, results, discussion, conclusion
   - Ethics in writing, plagiarism, and using plagiarism checkers
   - Selecting journals, understanding impact factors, and submission processes

Assignment : Write a short communication based on a recent lab experiment or field study.

7. **Reviewing and Proofreading** **(1 week)**

- Peer-review process and proofreading techniques
- Using proofreading symbols and online review tools
- Addressing reviewers' comments

Assignment : Peer review a classmate's short communication using proofing symbols and suggest improvements.

8. **Advanced Scientific Writing** **(1 week)**

- Writing review papers and meta-analyses.
- Understanding citation styles (APA, Vancouver) and managing bibliographies

Assignment : Rewrite the bibliography of the review paper done in Assignment 3 in APA, and Vancouver styles.

9. **Presenting Research** **(3 weeks)**

- Preparing and presenting research at conferences.
- Designing posters and oral presentations.

Assignment: Prepare a PowerPoint presentation on a food or nutrition-related topic

Assignment : Deliver the prepared PowerPoint presentation

Essential Readings

1. Mohapatra, P.K.J and Moulick, S. (2025). Principles of Scientific and Technical Writing. McGraw Hill
2. Hofmann, A.H. (2016). Scientific Writing and Communication. Oxford Univ Pr; 3rd edition
3. Day, R.A ; Gastel, B. (2006). How to Write and Publish a Scientific Paper. Greenwood Publishers
4. Kalpana, S. and Kanimozh, K. (2024). Scientific Writing Handbook. CBS Publishers and Distributors Pvt. Ltd.

Note: Examination scheme and mode shall be as per the Examination branch, University of Delhi.