



St. Xavier's College (Autonomous)

Mumbai

SYBSc Syllabus for Scientific

Communication Skills

3<sup>rd</sup> Semester

(June 2011 onwards)

### **Course Outcomes:**

Appreciate different types of scientific writing

Summarize different types of scientific material in one's own words without plagiarizing it

Critique a research abstract/article

Write a scientific proposal in a given format using a selected problem

Effectively communicate the experiments done in the laboratory with emphasis on methodology and outcomes

1. Introduction to scientific communication skills; Preparation of mind maps
2. Types of scientific writing: including but not limited to primary research papers, review articles, short communications, popular science articles, articles in newspapers, chapters in textbooks.
3. Plagiarism part 1; Paraphrasing exercise
4. Listening and Reading an article from a science magazine, comprehending, and summarizing it into a newspaper article or popular writing. Summary Writing: Watching a video clip and writing-related comprehensions.
5. Structure of science paper from different journals; understanding the IMRaD features of a simple research paper
6. Group discussion: identifying and understanding the structure of components of research articles; Title, introduction, methods, results, discussion, and conclusion
7. Framing the title for a research article, critiquing an abstract

### **Evaluation:**

CIA 1– Mind-map related to Microbiology exhibition – 10M

CIA 2 – Summary of a video clip – 10M

ESE – Continuous assessment based on different aspects of critiquing a research article (e.g. critiquing an abstract, framing a title, assessing the IMRAD format, critiquing different parts of the article, etc.) – 30 M

### **References**

Besley, J. C., & Tanner, A. H. (2011). What science communication scholars think about training scientists to communicate. *Science Communication*, 33(2), 239-263.

Buzan, T., & Buzan, B. (1993). *The Mind Map Book How to Use Radiant Thinking to Maximise Your Brain's Untapped Potential*. New York, USA: Plume.

Dawson, M. M., & Overfield, J. A. (2006). Plagiarism: Do students know what it is? *Bioscience Education*, 8(1), 1-15.

Matthews, J. R., & Matthews, R. W. (2014). *Successful Scientific Writing: A Step-By-Step Guide for The Biological and Medical Sciences*. Cambridge, UK: Cambridge University Press.

Sollaci, L. B., & Pereira, M. G. (2004). The introduction, methods, results, and discussion (IMRAD) structure: a fifty-year survey. *Journal of the Medical Library Association*, 92(3), 364.