

Ph.D. Elective

CH 645: Scientific Writing and Presentations (3-0-0-6)

Prerequisites: Nil

Introduction: Research – What is it?, How do researchers communicate?, Types of scientific communication, Examining examples of different types of scientific communication; Scientific Literature: Searching the scientific literature, Using online search engines, What is a refereed journal?, Plagiarism and how to avoid it; Beginning to Write: Establishing your constraints, Organizing your writing, Preparing outlines, Standard formats for scientific papers, research projects and theses, Style guides; Content: Creating a literature review, Preparing other sections of a research report (abstract, introduction, materials and methods, results and discussion, conclusions), Including and summarizing research data; Style and grammar: Scientific writing style, First-person vs. Third-person; Passive vs. active voice, Avoiding excessive wording, Grammar, Avoiding misuse of words, When to use footnotes; Reference citations: How to use references - Within the text, How to make lists of references; Revising: Dealing with revisions, Accepting criticism, Making sense of reviewers' comments, Making the changes, What to do if you don't agree with reviewers' comments; Other communication: Other types of scientific writing - research proposals, - creating a fact sheet/bulletin, - articles for popular press, - memos, letters and emails; Poster Presentations: Organization and formats for posters, Using Microsoft PowerPoint; Oral Presentations: Designing and preparing slides for an oral presentation, Importing tables, charts and graphs from Excel, Optimizing pictures for use in presentations.

Texts

1. R. A. Day and B. Gastel, *How to Write and Publish a Scientific Paper*, 7th Edition, Cambridge University Press, 2012.
2. M. Alley, *The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid*, 2nd Edition, Springer-Verlag, 2013.

References

1. M. Alley, *The Craft of Scientific Writing*, 4th Edition, Springer, 2018.