Resources for Writers in STEM Fields

In the Hixon Writing Center, we frequently work to connect writers with specific resources that can support their work. This handout lists a number of the books we find to be most useful to our students.

Selected guides to writing across STEM disciplines

Feak, Christine B. and John M. Swales. ***English in Today's Research World.*** Ann Arbor: University of Michigan Press, 2009.

This set of four slim volumes tackles core issues in scholarly writing, offering examples from across disciplines as well as tasks for learners to undertake. The four volumes are:

Navigating Academia: Writing Supporting Genres
Abstracts and the Writing of Abstracts
Telling a Research Story: Writing a Literature Review
Creating Contexts: Writing Introductions Across Genres

Glasman-Deal, Hilary. ***Science Research Writing: For Non-Native Speakers of English***. London: Imperial College Press, 2010.

Many writing guides for English language learners are organized around basic grammar and usage. This book, in contrast, presents information about grammar, usage, and rhetoric within the context of the real texts that scientists compose. Writers learn about the conventions of scientific fields, not just the conventions of academic English.

Harmon, Joseph E. and Alan G. Gross. ***The Craft of Scientific Communication***. Chicago: University of Chicago Press, 2010.

This carefully written book offers detailed guidance on (1) composing a scientific article, (2) presenting one's work, and (3) scientific writing style.

Hofmann, Angelika H. ***Scientific Writing and Communication: Papers, Proposals, and Presentations***. 2nd ed. Oxford: Oxford University Press, 2014.

This comprehensive volume is intended for professionals in the field, but it will be of use to advanced novices as well. It is thorough, clear, and exhaustive. Its areas of focus include scientific writing style, the writing process, research papers, review articles, grant proposals, and posters/presentations.

Selected discipline-specific guides

Hoffman, Angelika H. ***Writing in the Biological Disciplines: A Comprehensive Resource for Scientific Communication***. Oxford: Oxford University Press, 2013.

Similar in style to Hoffman's *Scientific Writing and Communication*, this thorough book focuses on communication in the field of biology. A further difference is that this book is aimed at undergraduates and includes annotated models, examples, guidelines for revision, and exercises for this audience. It offers students instruction about working with sources, creating and using visual elements, lab reports, the writing process, critical reading, and posters/presentations.

Irish, Robert and Peter Eliot Weiss. ***Engineering Communication: From Principles to Practice***. 2nd ed. Oxford: Oxford University Press, 2013.

In this accessible textbook, the authors explain technical engineering writing through a rhetorical lens, helping students grapple with the purposes of and audiences for engineering writing. The book will help students understand not just how to write, but *why* to write in that way.

Krantz, Steven G. ***A Primer of Mathematical Writing***. Providence, RI: American Mathematical Society, 1997.

While parts of this book are dated (e.g. a chapter on "Writing on a Computer"), it remains useful for carefully explaining fundamental aspects of writing in math, such as how to state and prove a theorem.

Paradis, James G. and Muriel L. Zimmerman. ***The MIT Guide to Science and Engineering Communication***. 2nd ed. Cambridge: MIT University Press, 2002.

This guide for writers in engineering is divided into two parts. The first covers fundamental aspects of writing in engineering (e.g. knowing your audience, developing graphics), and the second looks specifically at the common genres in which engineers write (e.g. proposals, progress reports, documentation).

Robinson, Marin S. and Fredericka L. Stoller. ***Write Like a Chemist***. Oxford: Oxford University Press, 2008.

This nearly 700-page long guide offers instruction, models, and exercises for writing in chemistry. It is divided into four main sections on (1) the journal article, (2) the scientific poster, (3) the research proposal, and (4) figures, tables, and schemes.

Zobel, Justin. ***Writing for Computer Science***. 3rd ed. London: Springer, 2014.

This guideline to doing and writing about research in computer science focuses in detail on matters of style. It also attends extensively to issues related to mathematics, visual elements, and algorithms that are crucial to writing in this field.