Writing Resources

Thesis, Grants, Proposals, Articles

The following is a list of writing resources that UROP feels are good materials to consult.   Some of these are references that Research Option students are encouraged to consult. Some of these resources are written for the student writer, while others are written for the mentor to help the undergraduate researcher. The writing topics included in this list range from writing and usage books to proper citation styles to grant writing and external funding proposals to guides to editing and writing theses. They are available from the UROP library, GT Library, or on-line.   UROP library materials can be checked out by coming to the UROP office. Please contact UROP for availability.

∗ **Advisor, Teacher, Role Model, Friend. On Being a Mentor to Students in Science and Engineering.** 6th ed. Washington, D.C.: National Academy Press, 2005.

> This is a guide for those who are likely to be mentoring someone - whether it's students, post-docs, junior faculty, or grad students. It offers different ways to be a good mentor with examples for specific situations at the different levels of undergrad, grad student, post doc, and junior faculty. While some are obvious, some are not - which is what makes it a valuable book for mentors to review. The book is divided into chapters explaining the different roles that a mentor may have and how to tailor the mentor's behavior based on that particular function. For example, there are chapters on being a faculty advisor, acting as a career advisor, as a teacher of skills (of communication - written and verbal, informal, people, teamwork, etc) and finally as a role model. In the chapter on mentor as a career advisor, tips on writing letters of recommendation are presented. The resources section at the end of the book has several good mentoring references listed, arranged by topic. This is another great starting book for those who are just starting to be a mentor and who need a little more focused guidance on what the roles are of a mentor and how to apply them. While this short guide is published by the National Academies Press with a focus on being an effective mentor in science and engineering, it contains mentoring help that is applicable to all disciplines.

> Available From: UROP Office

∗ Ahern-Rindell, Ami, and Stith, Brad. **Grant Writing Workshop: Biology**.

> This presentation is a good summary on grant writing especially for the sciences with notes on how to include undergraduate research assistants.

> Available From: UROP Office

∗ Alley, Michael. **The Craft of Editing : A Guide for Managers, Scientists, and Engineers**. New York: Springer, 2000.

> The Craft of Editing is designed to help all those who deal with scientific and technical writing by others in universities, government labs, businesses, or engineering firms become more effective and more efficient at editing the proposals, theses, journal articles, and reports that must be approved, graded, or reviewed. Unlike other texts that try to present the gamut of all possible editing experiences, this guide focuses on the kind of editing that a manager or teacher would perform with someone else's work. Written by the author of the best-selling Craft of Scientific Writing, the book deals with the subject in a refreshing way and includes a large number of enlightening examples and stories.

> Available From: GT Library

∗ Alley, Michael. **The Craft of Scientific Writing**. 3rd ed. New York: Springer, 1996.

The Craft of Scientific Writing is designed to help scientists and engineers--both professionals already active in the disciplines as well as students preparing to enter the professions--write about their work clearly and effectively. The author, who is both a writer and an applied physicist, approaches the subject in a fresh way. Using examples from a wide variety of authors and disciplines (including such well-known figures as Einstein, Bohr, and Freud), the book demonstrates the difference between strong scientific writing and weak scientific writing. In essence, this book shows how to bring ideas across to the intended audience. In addition, it contains advice on how to start writing and how to revise drafts. Written for use as a text in courses on scientific writing, the book includes many useful suggestions about approaching a wide variety of writing tasks--from laboratory reports to grant proposals, from internal communications to press releases--as well as a concise guide to style and usage appropriate for scientific writing. The book can also be useful for self-study and as an important reference for all scientists and engineers who need to write about their work.

Available From: GT Library

∗ Birgbauer, Eric, et al. **Advice on External Funding for Undergraduate Research: Lessons from the 2007 CUR Dialogues**. Powerpoint, 2007.

This is a presentation with top 10 tips in grant proposal writing as presented at the 2007 CUR Dialogues conference.

Available From: UROP Office

∗ Bolek, Catherine, and Forsythe, Ronald. "**Funding: What You Need to Know About Grant Writing**." Council on Undergraduate Research Quarterly Vol. 29 Iss. 1 (2008): pp. 9-13.

Hundreds of thousands of grant awards are made annually by government agencies, foundations, private sources and, increasingly, from the business sector. Most awards are made to universities and research institutions for the purpose of supporting scholarly work while a smaller number are awarded to community organizations, businesses and individuals. The good news is that with a set of clear goals and objectives and some technical assistance from your home institution's business or sponsored research office, most faculty members can be successful grant writers. The following information contains a brief introduction to grants-manship.

http://www.cur.org/Quarterly/mar08/Spring08UMES.pdf

∗ Booth, Wayne C., Colomb, Gregory G., and Williams, Joseph M. **The Craft of Research**. Chicago Guides to Writing, Editing, and Publishing. 2nd ed. Chicago: University of Chicago press, 2003.

This book discusses how to write a research paper, perform the literature background research, and finally construct and revise an effective paper. While a bit longer than other reference books on 'how to write' this is very comprehensive and offers practical suggestions and examples of how to choose and narrow down to an effective topic and how to determine if your topic is applied versus pure research with an explanation of the distinction between the two which is something that may confuse beginner researchers. The examples throughout the book are what I find most valuable as it offers the reader a true format and guide to writing well about research and demystifies the process. The revising section is also very informative and acts as a real guide through the revising process. This book is a great tool especially for students writing longer research papers and theses, but will be equally effective for those writing shorter research papers. It is written with examples from the humanities to the sciences and so is appropriate for any student from any major/college. I found this very valuable and would recommend to any student, grad student, or post doc struggling with writing.
Note: The 3rd Edition of this book is also available at the GT Library.

Available From: UROP Office

∗ Friedland, Andrew J., and Folt, Carol L. **Writing Successful Science Proposals**. New Haven: Yale University Press, 2000.

This guide to writing successful science research proposals presents writing the research proposal as a very doable and attainable process. It explains many of the unknowns such as how to organize the proposal, what to include in each section, how to further expand your ideas regarding significance statements and linking objectives and hypotheses, choosing titles, and rethinking, revising and resubmitting if the proposal request is declined. This guide is

perfect for all new researchers, from undergraduates to post-docs, starting their career and required to write a formal research proposal.

Available From: UROP Office, GT Library

∗ Harris, Martha Jane. "**Three Steps to Teaching Abstract and Critique Writing**." <u>International Journal of Teaching and Learning in Higher Education</u> Vol. 17 Iss. 2 (2006): pp. 136-146.

The instructional model presented is based upon the premise that abstracts and critiques are initial stages of scholarly writing. The pedagogy described is grounded in principles of effective lesson planning, instruction, and evaluation techniques. Step 1: 'Laying the Foundation' describes how to teach students the difference between 'good term paper' writing and scholarly writing. Step 2: 'Communicating Expectations and Evaluation Criteria' presents the content and use of guidelines and rubric. Step 3: 'Scaffolding for Success' outlines the use of journals, peer review, specific instruction, and resources. Initial students' success and positive feedback suggest that this instructional model has merit.

http://www.isetl.org/ijtlhe/pdf/IJTLHE28.pdf

∗ Lipson, Charles. **Cite Right : A Quick Guide to Citation Styles—MLA, APA, Chicago, the Sciences, Professions, and More**. Chicago Guides to Writing, Editing, and Publishing. Chicago: University of Chicago Press, 2006.

This book is exactly what the title suggests - a comprehensive reference on how to cite various resources (books, journals, newspapers, newsweeklies, etc) using the different citation styles. The different styles are described in a separate chapter for each style and include: the Chicago; MLA (humanities); APA (social sciences, education, engineering, and business); AAA (anthropology and ethnography); CSE (biological sciences); AMA (biomedical sciences, medicine, and nursing); ACS (chemistry); Physics, Astrophysics, and Astronomy citations; Mathematics and Computer Science Citations; Bluebook Legal; and ALWD Legal citations. This organization makes it a handy reference for all majors and for professors in determining what style might be the most appropriate for their field.

Available From: UROP Office

∗ Lipson, Charles. **How to Write a BA Thesis : A Practical Guide from Your First Ideas to Your Finished Paper**. Chicago Guides to Writing, Editing, and Publishing. Chicago: University of Chicago Press, 2005.

This book is written in an informal style that makes the presented goal of writing BA theses appear to be manageable. Do not skip over the introduction and the "how to use this book" chapter as it sets up a very nice timeline plan and guide on most effectively using this reference. I would emphatically recommend this book as a great book to have and follow along with when trying to write your thesis. Its tone is non-threatening, non-preachy, and comforting. The book touches on all aspects of writing without feeling tedious - hitting the parts that students are most worried about (the actual how to start, how to organize, how to write) while focusing less attention on what other guides typically cover in depth (ie citation styles, grammar). A great chapter for mentors to read is a chapter on problems that a student may face while writing and how to potentially solve them. For mentors, that chapter could be effective in understand difficulties that you may observe your student encountering in his process. This is what makes it a valuable reference - and demonstrates the author's obvious personal knowledge of what students are thinking and are experiencing when writing a thesis. The only minor criticism that I have is that the author does use some dated cultural references, albeit short ones, that current undergraduates may not appreciate, but these are typically not essential to understanding the point that the author is making and do not detract from the usefulness of the book.

Available From: UROP Office

∗ McVey, Mary. "**Writing in an Online Environment: Student Views Of "Inked" Feedback**." <u>International Journal of Teaching and Learning in Higher Education</u> Vol. 20 Iss. 1 (2008): pp. 39-50.

Providing effective feedback on writing is a challenge in any learning environment, but it is even more problematic in fully online instruction. The lack of face-to-face interaction in web-based classes increases the need for highly transparent, prompt, and personalized feedback. Student views on the use of a semi-structured template combined with the "inking" feature of a Tablet PC for feedback on writing in an online course are reported. Survey results indicated the procedure was seen as providing clear and focused feedback with a highly personal touch. Students also reported being able to use the feedback to improve their performance on later writing assignments. Overall, this appears to be a well-received and helpful method for giving writing feedback to students in online classes.

http://www.isetl.org/ijtlhe/pdf/IJTLHE365.pdf

* Perelman, Leslie C., Paradis, James, and Barrett, Edward. **The Mayfield Handbook of Technical & Scientific Writing**. Mountain View, Calif.: Mayfield Pub. Co., 1998.

This handbook acts as a reference guide to everything about technical and scientific writing, from the structure and planning of different document types to how to construct sentences. One nice thing about this handbook is how the authors frequently will give a 'rule' and then show examples of 'bad' usage and comparative 'good' usage of that specific example. The authors even do this when comparing weak versus improved paragraph examples. Chapter 3 "Elements of Technical Documents" is very useful in writing research reports as it breaks down and then explains what should be in each section of a paper (abstract, introduction, materials and methods, conclusion, etc). This can be a great help for those students who seem to be struggling with the concept of writing a more professional scientific report/paper/thesis. While this isn't a book written to be read in one sitting, but to be used more as a reference when writing difficulties arise (whether getting started or revising), it is a very valuable reference to refer students to use when encountering needing writing help. It has chapters on mechanics of writing (such as acronyms, inserting equations, and capitalization), punctuation, parts of sentences, nouns, verb order, and sentence structure. There is a chapter on proper usage of commonly misused words with explanations of which is most appropriate in specific instances (such as good/well, accept/except, and affect/effect/impact). That chapter alone is worth recommending this book to your student when revising papers.

Available From: UROP Office, GT Library, Online

http://www.mhhe.com/mayfieldpub/tsw/home.htm

* Silyn-Roberts, Heather. **Writing for Science and Engineering Papers, Presentations, and Reports**. Oxford ; Boston: Butterworth-Heinemann, 2000.

Are you a post-graduate student in Engineering, Science or Technology who needs to know how to: Prepare abstracts, theses and journal papers Present your work orally Present a progress report to your funding body Would you like some guidance aimed specifically at your subject area? ... This is the book for you; a practical guide to all aspects of post-graduate documentation for Engineering, Science and Technology students, which will prove indispensable to readers. Writing for Science and Engineering will prove invaluable in all areas of research and writing due its clear, concise style. The practical advice contained within the pages alongside numerous examples to aid learning will make the preparation of documentation much easier for all students.

Available From: GT Library

http://www.library.gatech.edu:2048/login?url=http://www.engineeringvillage.com/controller/servlet/OpenURL?genre=book&isbn=9780750646369

* Strunk, William, and White, E. B. **The Elements of Style**. 4th ed. Boston: Allyn and Bacon, 2000.

The classic book on writing styles and appropriate English grammar is very useful in reinforcing proper writing skills. In fourteen small pages, the reader is able to become familiar with the most common difficulties in English grammar and writing. That alone makes this book worth consulting. However, in addition, this book also offers a chapter on "Elementary Principles of Composition", "Words and Expressions Commonly Misused", "A Matter of Form" on writing sentences to have the greatest effect on the reader with the minimum of words, and "An Approach to Style (with a list of reminders)". This last chapter focuses on writing a document as a whole with such reminders as: "write in a way that comes naturally", "do not overwrite", "do not overstate" and with explanations of how to avoid or improve with each reminder. This is a great book for a brief explanation of English grammar and writing. For a more thorough

discussion of sentence structure another book like "Style Lessons in Clarity and Grace" by Williams or other similar books would be more useful.

Available From: UROP Office, GT Library (other editions)

∗ Turabian, Kate L. **A Manual for Writers of Research Papers, Theses, and Dissertations : Chicago Style for Students and Researchers**. Chicago Guides to Writing, Editing, and Publishing. 7th ed. Chicago: University of Chicago Press, 2007.

The Seventh edition of the Kate L. Turabian *A Manual for Writers* has been revised by Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams (authors of *The Craft of Research* (also reviewed)) to update this writing classic with the changes since the 6th edition and to also include a beginning section entitled "Research and Writing: from Planning to Production" adapted from their book *The Craft of Research*. This manual is divided into 3 parts: Part I: Research and Writing: From Planning to Production; Part II: Source Citation; and Part III: Style. Part II: Source Citation gives examples of how to cite a large variety of sources, from unpublished sources (such as dissertations) to interviews to the more common, but equally puzzling at times journals and electronic media. Part III: Style chapters include the topics of proper punctuation, spelling, plurals, possessive words, how to abbreviate, how to write titles of people and organizations, quotation rules and formats. Also handy is the appendix which details proper paper/thesis/dissertation formatting with examples. This book is a great single source reference for those writing longer papers, dissertations, and theses as it has in depth but concise chapters on the main problems and questions that a writer may have when completing a major academic writing project. The citation source style is the Chicago Method style and contains all of the updates from the more comprehensive *The Chicago Manual of Style*, 15th Edition, 2003.

Available From: UROP Office, GT Library

∗ Williams, Joseph M. **Style : Ten Lessons in Clarity and Grace**. 8th ed. New York: Pearson Longman, 2005.

This book is good to use as an addition to discussion on individual topics in writing more clearly. However, I did not really like it for use as a simple reference book for authors to go through to quickly refresh and/or learn writing rules, grammar rules as it felt very wordy. However, it would be useful when able to be read thoughtfully and at a slow pace. It is not a book to be read through quickly. This takes a textbook approach (as it is used and was developed for a college level class in writing by the author), but this can be beneficial as it starts logically at the beginning and progresses through teaching his style of editing with each chapter building upon the previous one. It does contain practice exercises with a number of examples. He focuses on the sentence and at the end the paragraph level of making coherent thoughts and demonstrates how to do so. It does have a chapter/appendix on punctuation which is always a good thing to review.

Available From: UROP Office, GT Library (1990 Edition)