Science Writing II
Introduction & Recap

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Our Zoom Life

- Check In
- Structure with Zoom
- Technical issues?
Texts

Textbook/Readings

Please check the CoursePlus site for additional readings to meet course objectives.

The following texts are strongly recommended:

Diana Hacker and Nancy Sommers. Rules for Writers, 9th Edition (Macmillan Learning)
This book is nearly required for novice writers and recommended as a reference for advanced writers.

George D. Gopen. The Sense of Structure (Pearson Education)
This book is recommended for advanced writers who want to grow their craft.

The following texts are available as reference via institutional subscription or as a free download and are recommended:


Roger Peng & Elizabeth Matsui. The Art of Data Science (LeanPub: https://leanpub.com/artofdatascience, go to “The Book,” you can drag the payment to $0)
This book is nearly required for anyone doing an original research article with data analysis.

The following texts are useful generally:

Strunk and White. The Elements of Style, any edition (Allyn & Bacon/Pearson Education)

Paul J. Silvia. How to Write a Lot (American Psychological Association)
## Course Schedule

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<th>Date</th>
<th>Session</th>
<th>Pre/Post-class activity or assignment</th>
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<tr>
<td>March 25</td>
<td>Course introduction</td>
<td><strong>Pre-class:</strong> Review materials from Science Writing I on literature review; CoursePlus required reading</td>
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<td><strong>Post-class:</strong> Scan Seidman powerpoints</td>
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<td>April 1</td>
<td>Writing from the reader’s perspective</td>
<td><strong>Pre-class:</strong> Gopen “The Science of Scientific Writing”</td>
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<td><strong>Assignment:</strong> Paper topic &amp; format</td>
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<td>April 8</td>
<td>Open-access publication (Caitlin Carter)</td>
<td><strong>Assignment:</strong> Revised paper topic &amp; format</td>
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<td>April 15</td>
<td>Publication Etiquette</td>
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<tr>
<td>April 22</td>
<td>How to create effective tables &amp; figures</td>
<td><strong>Assignment:</strong> Paper draft 1</td>
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<td>April 29</td>
<td>Writing pearls &amp; pet peeves (with Dr. Jessie Buckley)</td>
<td><strong>Assignment:</strong> Paper draft 2</td>
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<td>May 6</td>
<td>Preprint publication and peer review</td>
<td><strong>Pre-class:</strong> CoursePlus required readings</td>
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<td><strong>Assignment:</strong> Final paper due (graduates)</td>
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<tr>
<td>May 13</td>
<td>Course synthesis &amp; discussion</td>
<td><strong>Assignment:</strong> Final paper due (non.grads)</td>
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Goal of this Course

- Improve your writing, regardless of your current skill
  - Productivity
  - Technical writing skills
  - Writing as art and science

- Produce a manuscript
  - Suitable for co-author review
  - Intended for potential publication
Assessment

- Participation: 45%
  - Pre/Post class activities
  - Attendance
  - Contributions

- Assignment: 55%
  - Weighted to final product
  - Interim assignments and final assignment
Paper Format

This assignment may take a number of forms:

- Narrative or scoping literature review (systematic reviews only with instructor approval)
- Original research article*
- Mini-review (master’s only)
- Commentary or perspective (master’s only)

*Use of preliminary, rather than complete, data is allowed for this option, as long as there are not contradictions to preliminary analysis (e.g. blinded study or trial where the analysis is restricted).
Basic Paper Format

- Problem Statement or Motivation
- Research Question or Thesis Statement
- Content of Paper
- Main Finding or Conclusion
- Implications or Public Health importance
Narrative reviews

- Review of literature based on thesis or goal
- Many different sub-types
  - Critical review
  - Overview

Narrative Review Format

- Problem Statement or Motivation
- Research Question or Thesis Statement
- Content of Paper
- Main Finding or Conclusion
- Implications or Public Health importance

Brief search methods (sometimes at end)
Results (narrative and tabular summary)
Frame thesis in synthesis (critique of lit optional)
Original Research Article

- Novel contribution to the literature, typically based on observation, intervention or experiment

- Different structures may have different guidances
  - STROBE (observational epidemiology)
  - CONSORT (clinical trial)
  - ARRIVE (in vivo experimentation)

Original Research Format

Problem Statement or Motivation

Research Question or Thesis Statement

Content of Paper

Main Finding or Conclusion

Implications or Public Health importance

Gap in literature that needs to be addressed

Methods

Results (narrative findings, tables and figures)

Comparison to other published studies
Mini-Review & Other forms

- Mini-review: shorter version of a narrative review
  - May be smaller literature available to review
  - May be extremely focused or narrow

- Commentary or Editorial: Response to (typically recent) publication, often includes literature synthesis component (critique or elaboration)

- Perspective: Viewpoint or hypothesis on a single study or body of work, often includes literature synthesis and critique
Interim & Final Assessments

**Paper topic & target journal:** Provide the research question you wish to answer, how you will accomplish this (e.g. review or original research approach), and your top three choices for a target journal (top choice, second choice, third choice).

**Revised paper topic & target journal:** Please edit your first assignment to respond to feedback by course instructor(s).

**Paper draft 1:** Your draft can be in outline or paragraph format or a hybrid. References can be dropped into the outline or included as a list at the end and do not have to be formatted. The more developed this draft is, the more feedback you will receive.

**Paper draft 2:** This draft should be in paragraph format, although gaps are allowed. References should be either parenthetical or should be formatted for the journal, and reference gaps are allowed (e.g. “need ref” or “find other refs”). A fully-formatted version is allowed.

**Final paper:** Your final paper should be fully-formed (no gaps) and should be properly referenced per journal specifications. Review of this will focus on your writing and communication of science, and may include scientific critique as it relates to how you are crafting your argument (if the science is not strong, the argument will not be strong).
Questions? Your goals?