Writing Scientific Papers II (180.662.01)
Course Syllabus, 2019-20

Primary Instructors
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Class Sessions
Fourth Term
W 12-1:30pm, Zoom

Please download and import the following iCalendar (.ics) files to your calendar system.
Weekly: https://jhjhm.zoom.us/meeting/tZYuc-6vqjMuX36U20AZCIU8aYPxdQVqw/ics?icsToken=98tyKuGqrT8tHdCdtF3ta7MqW9r7b_HMI0kd_JYPzD7flAlmOgLPD9JaNoNJAc-B

Join Zoom Meeting
https://jhjhm.zoom.us/j/823477484
Meeting ID: 823 477 484

One tap mobile
+16465588656,,823477484# US (New York)
+16699009128,,823477484# US (San Jose)

Dial by your location
+1 646 558 8656 US (New York)
+1 669 900 9128 US (San Jose)
Meeting ID: 823 477 484
Find your local number: https://jhjhm.zoom.us/u/acCHfEZKrV

Join by SIP
823477484@zoomcrc.com

Office hours by appointment

Prerequisites
Students in this course should have successfully completed Scientific Writing I.
Course Description
This course is required for doctoral students taking the sequence of courses in Scientific Writing in Year 2. The overall learning objective of this course is to enable doctoral students to attain skills in writing successful scientific papers that are accepted by highly ranked peer-reviewed journals.

This course confirms and utilizes skills acquired in Year 2 courses related to identifying, accessing, and selecting relevant scientific literature from online information sources for writing a paper. In addition, skills acquired in SWI in preparing a bibliography will also be utilized. Students will work on papers related to their dissertation or thesis research.

This course also informs participants on all aspects of preparing a paper for submission to a peer reviewed scientific journal. It conveys the elements of successful scientific writing, including standard structural elements (abstracts, keywords, introductions, methods, results, figures and tables, bibliographies, citations, and acknowledgements) as well as novel elements that enhance paper acceptance (highlights, demonstrative figures, and media inserts). Through review of excellent scientific papers, conveys principles of effective illustrations as well as accurate and clear writing, including grammar, sequence, and sentence structure. It demonstrates model sequences for publication from contacting editors through response to reviewer comments, and it develops awareness of how to select appropriate journals as well as explains NIH requirements open source publication, managing data and providing access to data as well as ensuring free access to published papers.

Course Learning Objectives
Upon successfully completing this course, students will be able to:
1. Use computer-based systems to build an archive of information and references.
2. Recognize the elements of scientific writing, including structure and language, data presentation, and citation management.
3. Critically review scientific publications and identify what makes an effective publication.
4. Read and respond to editorial reviews.
5. Explain open source publishing and other NIH requirements for publication.

Audience
This course is designed primarily for 2nd year doctoral students in Environmental Health & Engineering; departmental masters and postdoctoral students with a strong interest in writing are welcome to join. Other students are allowed with permission.

Teaching Philosophy
Faculty in this course will take an interactive role, building concepts and material to guide students to draw their own conclusions. This course will combine didactic instruction with experiential training in writing with assessment through the course-long project.
Textbook/Readings

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

The following texts are strongly recommended:

This book is nearly required for novice writers and recommended as a reference for advanced writers.

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](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 Sessions

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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</td>
<td><strong>Assignment:</strong> Revised paper topic &amp; format</td>
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<td>(Caitlin Carter)</td>
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<td>April 15</td>
<td>Publication Etiquette</td>
<td><strong>Pre-class:</strong> Devang Mehta “Science first, Scientists Later;” Journal author guidelines; My NCBI</td>
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<td>April 22</td>
<td>How to create effective tables &amp; figures</td>
<td>Assignment: Paper draft 1</td>
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<td>April 29</td>
<td>Writing pearls &amp; pet peeves (with Dr. Jessie Buckley)</td>
<td>Assignment: 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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Grading

Participation & attendance (discussion): 45%
Assignments (manuscript drafts and final paper): 55%

Evaluation

Participation & attendance: Students should attend class via Zoom and participate in course discussion. This requirement is designed to encourage active participation and engagement in discussion. There are periodic assignments of readings to be completed before class.

Assignment: Students will prepare a manuscript suitable to submit to co-authors and intended for peer-review publication as the final deliverable from the course-long project. The student will identify a suitable target journal and will follow the formatting guidelines of the journal in preparation of the final submission for the course. The goal is that the version that is submitted should be, in theory, ready to send to co-authors on a manuscript for review, comment and approval to submit (i.e. be publication-ready).

This assignment may take a number of forms:

1. Narrative or scoping literature review (systematic reviews only with instructor approval)
2. Original research article*
3. Mini-review (master’s only)
4. 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).

The goal of this assignment is to catalyze a project that you hope to work on regardless of your participation in this course, and following conclusion of this course, we encourage you to work with your PI and co-authors to eventually bring this work to submission for peer-review publication. It is acceptable (and encouraged) for you to seek input and guidance from your PI as part of this process.

Students will develop topics and turn in drafts as assignments to dropbox according to the schedule under course sessions and on CoursePlus. The instructors recommend use of a referencing software program to manage references.

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).

The 55% for this collection of assignments will be strongly weighted to the final paper and will take the most generous option for all students, e.g. a student who is a novice writer and is diligent to complete assignments on time according to instructions and respond as best as possible to critiques will receive full credit, with emphasis on the growth of the writing trajectory within student.

**Academic Ethics and Student Conduct Code**

Students enrolled in the Bloomberg School of Public Health of The Johns Hopkins University assume an obligation to conduct themselves in a manner appropriate to the University's mission as an institution of higher education. A student is obligated to refrain from acts which he or she knows, or under the circumstances has reason to know, impair the academic integrity of the University. Violations of academic integrity include, but are not limited to: cheating; plagiarism; knowingly furnishing false information to any agent of the University for inclusion in the academic record; violation of the rights and welfare of animal or human subjects in research; and misconduct as a member of either School or University committees or recognized groups or organizations.

Students should be familiar with the policies and procedures specified under Policy and Procedure Manual Student-01 (Academic Ethics), available on the school’s portal: [http://my.jhsphs.edu](http://my.jhsphs.edu).

The faculty, staff and students of the Bloomberg School of Public Health and the Johns Hopkins University have the shared responsibility to conduct themselves in a manner that upholds the law and respects the rights of others. Students enrolled in the School are subject to the Student Conduct Code (detailed in Policy and Procedure Manual Student-06) and assume an obligation to conduct themselves in a manner which upholds the law and respects the rights of others. They are responsible for maintaining the academic integrity of the institution and for preserving an environment conducive to the safe pursuit of the School's educational, research, and professional practice missions.
Student Health & Well-Being

Johns Hopkins University is committed to helping you thrive personally and professionally and providing an environment that supports your health and well-being. The Johns Hopkins Student Assistance Program (JHSAP) provides free services to help students identify and manage challenging issues. Services include:

- short-term counseling,
- crisis response, and
- school-life coaching and adjustment.

Additional information and appointment scheduling is available online at [https://jhsap.org/](https://jhsap.org/). Confidential and free support is available 24/7. To talk to someone immediately, call 443-287-7000.

Disability Support Services

If you are a student with a documented disability who requires an academic accommodation, please contact the Office of Disability Support Services at 410-502-6602 or via email at [JHSPH.dss@jhu.edu](mailto:JHSPH.dss@jhu.edu). Accommodations take effect upon approval and apply to the remainder of the time for which a student is registered and enrolled at the Bloomberg School of Public Health.