

Summer Institute of Advanced Epidemiology and Preventive Medicine Summer 2015

Medical Writing – Course Syllabus

July 12-16, 2015 / 14:00-18:30
 Final Exam July 17, 2015 / 9:00-11:00
 Sackler Faculty of Medicine / Room 215
 Course No. 0158.1211 / 2 Academic Credits

Course Instructor: Dr. Philip Greenland, Northwestern University
Teaching Assistant: Ms. Hagar Interator
Date / Time / Room: July 12-16, 2015 / 14:00-18:30 / Room 215
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Philip Greenland, MD

Dr. Greenland is the Director of the Center for Population Health Sciences - Institute for Public Health and Medicine, Harry W. Dingman Professor of Cardiology, and a Professor in Preventive Medicine-Epidemiology. Dr. Greenland's research, teaching and clinical interests focus on the prevention of cardiovascular diseases (CVD). He has authored or coauthored over 400 research papers, editorials, and reviews on topics related primarily to heart disease prevention, heart disease risk prediction, and heart disease in women. Dr. Greenland's current research is focused mainly on prediction and early detection of CVD, including coronary imaging and metabolomics. Dr. Greenland is Director of a Post-doctoral Training Program in Cardiovascular Disease Epidemiology and Prevention, funded by the National Institutes of Health in the USA. He is also Director of the Population Research Center, part of the American Heart Association-funded prevention research network, based at Northwestern University. He is also a Senior Editor of the Journal of the American Medical Association (JAMA).

Course Description

This course will be conducted in part as lecture and in part as a hands-on workshop that will review and discuss the steps involved in preparing, peer reviewing, and revising manuscripts for publication. Lectures by the Instructor will supplement each topic to facilitate discussions in class. Suggested readings are provided, but these are considered optional. The course participants will refine and demonstrate writing, reading, editing, and reviewing skills through exercises and class discussions of the following subjects:

1. How journal editors and reviewers reach decisions about articles - what is important?
2. What matters - Impact Factor?
3. Editorial Ethics: Who is an author? What else is important?
4. What and how to prepare before you write
5. Learning by doing peer review
6. Learning to do an outline before writing
7. All the basics for submission: Cover letter, Title page, Abstract, Introduction, Methods, Results, Tables, Figures, References, Acknowledgements, Supplementary Material
8. Responding to a review

The course should be of benefit to anyone interested in improving medical writing skills and better understanding the biomedical publication process.

Special Request: Pre-Course Assignment

This class will utilize written work for workshop analysis. It is desirable, and preferred, to utilize actual written materials prepared by members of the class. **Please submit at least one paper that you are currently working on / under peer review or even an outline of a paper that you are proposing (See [Class 3: Assignment](#)).** Wherever possible, workshop discussions will be based upon actual writing from members of the class. **Please participate!!!**

Textbook/Reading Materials

You are not required to purchase any text for this course. All recommended readings are available online as PDFs (<http://bit.ly/1NljcQ>).

If you wish to own a relevant resource text, the best text, in my opinion, is currently out of print. However, if you can find it on Amazon, or elsewhere, you might want to buy it: Writing and Publishing in Medicine by Edward J. Huth, Williams and Wilkins (published 1998).

Another very good and very short text is How to Write A Paper (5th Edition) edited by George M. Hall, 2013, Wiley-Blackwell, BMJ Books.

Requirements

To receive academic credit for the *course*, participants *must pass* the final exam with a grade of at least 60 (D). Non-credit participants are not required to take the final exam.

Course Schedule (July 12-16, 2015 / 14:00-18:30)

14:00-15:30 Lecture
15:30-16:00 Break
16:00-17:30 Lecture
17:30-17:45 Break
17:45-18:30 Lecture

Course Schedule

Class 1: Sunday, July 12, 2015

Topics:

- The medical literature and scientific publishing – getting started
- Authorship: who qualifies to be an author?
- Review backgrounds and goals of the members of the class
- Overview of course – workshop, plus lectures
- Discuss the medical literature and the scientific publication process
- Who is an author? Ethics of authorship, what is a guest author, etc.
- Publication metrics – Impact Factor and more

Discussion:

- Be prepared to discuss your personal goals and expectations for the class.
- Be prepared to discuss your previous publication experience and any issues you have had.

Recommended Reading:

1. Rothman KJ. Writing for epidemiology. *Epidemiology*. 1998 May;9(3):333-7. PubMed PMID: 12296359. ([PDF available](#))
2. Macrina FL. Teaching authorship and publication practices in the biomedical and life sciences. *Sci Eng Ethics*. 2011 Jun;17(2):341-54. Epub 2011 May 1. PubMed PMID: 21533836. ([PDF available](#))
3. Durieux V, Gevenois PA. Bibliometric indicators: quality measurements of scientific publication. *Radiology*. 2010 May;255(2):342-51. doi: 10.1148/radiol.09090626. PubMed PMID: 20413749. ([PDF available](#))
4. Carpenter CR, Cone DC, Sarli CC. Using publication metrics to highlight academic productivity and research impact. *Acad Emerg Med*. 2014 Oct;21(10):1160-72. doi: 10.1111/acem.12482. PubMed PMID: 25308141. ([PDF available](#))
5. van Eck NJ, Waltman L, van Raan AF, Klautz RJ, Peul WC. Citation analysis may severely underestimate the impact of clinical research as compared to basic research. *PLoS One*. 2013 Apr 24;8(4):e62395. doi: 10.1371/journal.pone.0062395. Print 2013. PubMed PMID: 23638064; PubMed Central PMCID: PMC3634776. ([PDF available](#))

Class 2: Monday, July 13, 2015

Topic: The Peer Review Process

Discussion: Understanding how to review a paper - and applying those same practices and principles to your own papers - can improve your own work. For this class, we will discuss principles of conducting reviews followed by several hands-on examples which will be done in class.

Recommended Reading:

6. Cummings P, Rivara P. Reviewing Manuscripts for Archives of Pediatrics & Adolescent Medicine. *Arch Pediatr Adolesc Med* 2002; 156: 11-13. ([PDF available](#))
 7. Lovejoy TI, et al. Reviewing manuscripts for peer-review journals: a primer for novice and seasoned reviewers. *Ann Behav Med*. 2011 Aug;42(1):1-13. PubMed PMID: 21505912. ([PDF available](#))
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Class 3: Tuesday, July 14, 2015

Topic: Writing the First Draft: Structure of a Medical Research Paper

- Using an Outline: Getting ready to write before you actually begin
- Developing the "critical argument"
- Distinguishing between a "report" of your work and a "paper" that reports your work and puts it in proper context

Recommended Reading:

8. Chapter 5: Critical Argument and the Structure of Scientific Papers. Huth, 1999. ([PDF available](#))
9. Chapter 6: The Research Paper: General Principles for Structure and Content. Huth, 1999. ([PDF available](#))
10. Chapter 12: The first draft. Huth, 1999. ([PDF available](#))

Assignment:

If you were not able to send a paper in advance, or even if you did, it would be desirable for you to prepare and send to Prof. Greenland, in advance, a **detailed outline** of an original paper (preferably something you are working on currently or just getting ready to begin). The outline should be detailed enough for others to understand the continuity and flow of your ideas. **Two full pages is about the right length, including title, abstract, introduction, methods, results and discussion (no references needed at this stage).**

Recommended reading prior to Class 4: Wednesday, July 15, 2015 (see next page).

Class 4: Wednesday, July 15, 2015

Topic: Improving Abstracts and Tables

Discussion: This session will be dedicated to *analysis of abstracts and tables* taken from papers submitted to Professor Greenland in advance. If possible, please read the “advance” readings and come prepared to discuss the abstracts and tables that will be distributed in class.

Recommended Reading – before class:

11. Chapter 13: The First Draft: Titles and Abstracts. Huth, 1999. ([PDF available](#))
 12. Chapter 14: The First Draft: Tables. Huth, 1999. ([PDF available](#))
 13. Cummings P, Rivara FP, Koepsell TD. Writing informative abstracts for journal articles. Arch Pediatr Adolesc Med. 2004;158(11):1086-8. ([PDF available](#))
 14. Winker MA. The need for concrete improvement in abstract quality. JAMA. 1999. Mar 24-31;281(12):1129-30. PubMed PMID: 10188667. ([PDF available](#))
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Class 5: Thursday, July 16, 2015

Topics:

- Responding to Reviews and Increasing Chances for Success
- Wrapping-up (Final Questions and Discussion)

Discussion:

- Two papers will be chosen for peer reviews and response letters to be reviewed and discussed in class.
- Any additional topics of interest can be addressed, as time allows. For example, how to become an editor of a journal if this is of interest to anyone!

Recommended Reading:

15. Chapter 22: Peer reviewing and the editor’s decision. Huth, 1999. ([PDF available](#))
 16. Provenzale JM. Revising a manuscript: ten principles to guide success for publication. AJR Am J Roentgenol. 2010 Dec;195(6):W382-7. PubMed PMID: 21098168. ([PDF available](#))
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