

Medical Writing

July 16-21 | Course No. 0158.1211

Course Instructor:	Philip Greenland (Northwestern University)
Date & Time:	July 16-20, 2023 S, M, Th 14:00-18:30; T, W 14:00-19:00
Final Exam:	July 21, 2023 9:00-11:00
Location:	Room 927 Faculty of Medicine, Tel Aviv University
Teaching Assistant:	Ms. Anne Marie Novak (annemarie@mail.tau.ac.il)
Course Documents:	bit.ly/MedWriting

Pre-requisites & Intended Audience

No pre-requisites. Research experience is highly recommended.
The course is intended for Master's and PhD level students or above.

Academic Credit & Course Requirements

2 Academic Credits (4 ECTS). Participants must pass the final exam with a grade of 60 (D). Noncredit participants will receive a certificate of participation and are not required to take the final exam, but are expected to participate.

All class members will be expected to take part in active discussion, do at least one hour of reading and 1-2 hours of writing each day before class, and submit a paper for review *before the class begins* on July 16.

Recommended Reading

Text – You are not required to purchase any text for this course. All assignments will be provided as library references or PDF's. However, if you wish to own a relevant resource text, I think the best text is currently out of print, but if you can find it on Amazon or elsewhere, you might want to buy it. It is:

- **Writing and Publishing in Medicine**, by Edward J. Huth, Williams and Wilkins, published 1998.
 - We will supply several chapters as PDFs for the course.
- **How to Write A Paper, 5th Edition**, edited by George M. Hall, 2013, Wiley-Blackwell, BMJ Books. Another very good, and very short, text
- **On the Internet: The George Mason University Writing Center** (<https://writingcenter.gmu.edu/>). An extremely well-done publicly available resource for writers with many step-by-step guides.

Important Request!

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 send to annemarie@mail.tau.ac.il, in advance of the class, at least one paper that you are currently working on, or a paper currently under peer review, or even an outline of a paper that you are proposing.** Wherever possible, workshop discussions will be based upon actual writing from members of the class. **This paper will also be the basis of the graded course assignment!!!**

Course Description

The course should benefit anyone interested in improving medical writing skills and more effectively understanding the biomedical publication process. Students will refine and demonstrate writing, reading, editing, and reviewing skills. Discussion areas include: How journals “think”, what matters (impact factor, etc.), what/how to prepare before writing, ethics of authorship, and understanding the peer review process.

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

This is a hands-on course designed to improve medical writing skills for those who already have some experience in medical writing, including those with moderately extensive experience.

Sessions will cover the following topics:

- Reviews of published articles to improve awareness of common mistakes
- Improving titles and abstracts;
- Preparing an outline before writing a paper – why this is a good idea and how to do it;
- Discussions of papers in progress by members of the class;
- Preparing a response to a review – how to be successful in getting your nearly accepted paper to the finish line.

Teaching Methods:

There will be readings for each class and some writing assignments between classes. The class depends on very active participation in analyzing papers, writing outlines, titles, abstracts, and responses to reviews. While there will be some degree of "lecturing" from the professor, the class is primarily designed for active learning by the students rather than passive learning from lectures. There will be 2 guest lectures by prominent medical journal editors to supplement the teaching in class.

Grade Breakdown

The grade will be based on 3 components: 40% participation in class discussions; 40% revisions to your paper and your outlines; 20% final exam.

Non-credit participants may also submit the assignment to receive non-graded feedback on their revisions.

Course Schedule

14:00-15:30 Lecture and Discussion

15:30-16:00 Break

16:00-17:30 Lecture and Discussion

17:30-17:45 Break

17:45-18:30/19:00 Lecture and Discussion



School of Public Health

Summer Institute of Advanced Epidemiology and Preventive Medicine

Instructor Bio

Professor Greenland is the Harry W. Dingman Professor of Cardiology, and Professor of Preventive Medicine at Northwestern University in Chicago. Prof. Greenland's research, teaching and clinical interests focus on the prevention of cardiovascular diseases (CVD). He has authored or co-authored over 550 research papers, editorials, and reviews on topics related primarily to heart disease prevention, heart disease risk prediction, and heart disease in women. Prof. Greenland's current research is focused mainly on the prediction and early detection of CVD, including coronary imaging and metabolomics. Prof. Greenland is a Senior Editor of the Journal of the American Medical Association (JAMA) and was previously Editor-in-Chief of Archives of Internal Medicine (now known as JAMA Internal Medicine).

Course Timetable

Sunday, July 16 (Day 1)	
Topics:	<ol style="list-style-type: none"> 1. Review backgrounds and goals of the members of the class 2. Overview of course – workshop, plus lectures 3. The medical literature and scientific publishing – getting started 4. Authorship: who qualifies to be an author? 5. Publication metrics – Impact Factor and more
Recommended Readings:	<ol style="list-style-type: none"> a. Rothman KJ. Writing for epidemiology. <i>Epidemiology</i>. 1998 May;9(3):333-7. PubMed PMID: 12296359 (PDF available). b. Macrina FL. Teaching authorship and publication practices in the biomedical and life sciences. <i>Sci Eng Ethics</i>. 2011 Jun;17(2):341-54. Epub 2011 May 1. PubMed PMID: 21533836. (PDF available) c. Durieux V, Gevenois PA. Bibliometric indicators: quality measurements of scientific publication. <i>Radiology</i>. 2010 May;255(2):342-51. doi: 10.1148/radiol.09090626. PubMed PMID: 20413749. (PDF available) d. Carpenter CR, Cone DC, Sarli CC. Using publication metrics to highlight academic productivity and research impact. <i>Acad Emerg Med</i>. 2014 Oct;21(10):1160-72. doi: 10.1111/acem.12482. PubMed PMID: 25308141 (PDF available) e. 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. <i>PLoS One</i>. 2013 Apr 24;8(4):e62395. doi: 10.1371/journal.pone.0062395. Print 2013. PubMed PMID: 23638064; PubMed Central PMCID: PMC3634776. (PDF available).
For additional discussion:	<ul style="list-style-type: none"> • 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. • If time allows, we will start to review some published papers for discussion in class. We will continue this on Day 2.

Monday, July 17 (Day 2)	
Topic:	<p>The Peer Review Process</p> <p>Understanding how to review a paper --- and applying those same practices and principles to your own papers --- can make your own work better. For this class, we will discuss principles of conducting reviews followed by several hands-on examples which will be done in class.</p>
Recommended Readings:	<p>a. Cummings P, Rivara P. Reviewing Manuscripts for Archives of Pediatrics & Adolescent Medicine. <i>Arch Pediatr Adolesc Med</i> 2002; 156: 11-13. (PDF available). This paper is “old” but still very relevant.</p> <p>b. Lovejoy TI, et al. Reviewing manuscripts for peer-review journals: a primer for novice and seasoned reviewers. <i>Ann Behav Med</i>. 2011 Aug;42(1):1-13. PubMed PMID: 21505912. (PDF available).</p>
Tuesday, July 18 (Day 3)	
Topics:	<p>Writing the First Draft: Structure of a Medical Research Paper</p> <ol style="list-style-type: none"> 1. Using an Outline: Getting ready to write before you actually begin. 2. Developing the “critical argument.” 3. Distinguishing between a “report” of your work and a “paper” that reports your work and puts it in proper context.
Recommended Readings:	<ol style="list-style-type: none"> a. Chapter 5: Critical Argument and the Structure of Scientific Papers; Huth, 1999. (PDF available). b. Chapter 6: The Research Paper: General Principles for Structure and Content; Huth, 1999. (PDF available). c. Chapter 12: The first draft: Text; Huth, 1999 (PDF available). d. Outlining: See this paper from George Mason University: https://writingcenter.gmu.edu/writing-resources/writing-as-process/outlining
Assignment:	<p>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, 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.</p> <p><u>Two full pages</u> is about the right length, including title, abstract, introduction, methods, results and discussion (no references needed at this stage). If you want to <u>use an existing paper</u> for the outline – see the guide for “reverse outlining” https://writingcenter.gmu.edu/writing-resources/writing-as-process/reverse-outlining</p>

Wednesday, July 19 (Day 4)	
Topic:	Improving Abstracts and Tables
Recommended Readings:	<p>Advance readings (4 very short readings):</p> <ol style="list-style-type: none"> Chapter 13: The First Draft: Titles and Abstracts; Huth, 1999 (PDF available). Chapter 14: The First Draft: Tables; Huth, 1999 (PDF available). Cummings P, Rivara FP, Koepsell TD. Writing informative abstracts for journal articles. Arch Pediatr Adolesc Med. 2004;158(11):1086-8. (PDF available) Winker MA. The need for concrete improvement in abstract quality. JAMA. 1999. Mar 24-31;281(12):1129-30. PubMed PMID: 10188667. (PDF available) George Mason resource on abstracts: https://writingcenter.gmu.edu/writing-resources/imrad/abstracts-in-scientific-research-papers-imrad
For discussion:	<ul style="list-style-type: none"> This session will be dedicated to <u>analysis of abstracts and tables</u> taken from papers submitted in advance. If possible, please read the “advance” readings and come prepared to discuss the abstracts and tables that will be distributed in class.
SPECIAL LECTURE BY ZOOM	<ul style="list-style-type: none"> Dr. Michael Berkwits, Electronic Editor and Deputy Editor, JAMA Network, Chicago, Illinois, US Title: Topics in Electronic Publishing: Growing Your Online Visibility and Alternative Metrics <p>Michael Berkwits is an ABIM-certified general internist who is Electronic Editor at The JAMA Network, where he is responsible for overseeing evolution of the Network’s 13 journals through development of new electronic content, features, and services, and for extending the reach of JAMA Network assets through electronic campaigns and platforms. Dr. Berkwits trained in internal medicine at the University of Michigan (1990-1993), was a Robert Wood Johnson Clinical Scholar at the University of Pennsylvania (1994-1996) and Assistant and then Adjunct Associate Professor of Medicine at University of Pennsylvania (1996-2013) and was then a deputy editor at Annals of Internal Medicine (2005-2013) before joining the JAMA Network in 2013. He wrote and edited the Merck Manuals (print and online) 2001-2005.</p>

Thursday, July 20 (Day 5)	
Topics:	1. Responding to Reviews and Increasing Chances for Success 2. Wrapping-up (Final Questions and Discussion)
Recommended Readings:	a. Chapter 22: Peer reviewing and the editor's decision. Huth, 1999 (PDF available). b. 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).
For work in class:	<ul style="list-style-type: none"> • As time allows, students can work on revising their papers and getting one-on-one advice (with sign-up in advance) with Prof. Greenland • NOTE: <u>Any additional topics of interest</u> can be addressed in this last class, as time allows. <ul style="list-style-type: none"> ○ Suggested topics: Cover Letters, suggesting reviewers, becoming a reviewer, etc.
SPECIAL LECTURE BY ZOOM	<ul style="list-style-type: none"> • Dr. Howard Bauchner Editor-in-Chief, JAMA and the JAMA Network (2011-2021) Editor-in-Chief, Archives of Diseases in Childhood (2003-2011) • Topics: Open Science; Evolving Issues in Medical Publishing; Publishing in Influential Journals <p>Howard Bauchner, MD is Professor of Pediatrics and Public Health at Boston University School of Medicine. He served as Editor in Chief of JAMA and the JAMA Network between 2011 and 2021 and Editor in Chief of Archives of Disease in Childhood between 2003 and 2011. At Boston University, prior to JAMA, he was Vice-Chair of Research for the Department of Pediatrics and Chief, Division of General Pediatrics. He is a member of the National Academy of Medicine and an honorary fellow of the Royal College of Pediatrics and Child Health. In 2022 and 2023 he was a Visiting Scholar at the National University of Singapore. He writes on issues such as conflict of interest, pre-print servers, drug-approval, and open-science. His extensive experience as an Editor in 2 major medical journals is a tremendous resource for experienced and inexperienced authors alike.</p>
Friday, July 21 (Final Exam)	
09:00-11:00	Room 935, Faculty of Medicine (Teaching Assistants will be present)