MTR 605: Scientific Writing II: Manuscript Writing
Summer I 2015
Course Director: Steven Siegel, MD, PhD

Dates, Time & Location:
May 26 – June 30, 2014
Tues & Thurs, 2:30- 3:45 pm
Location: 8030 Maloney

Contact information:
Steven J. Siegel, M.D.,Ph.D.
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Clinic: 215 662 2826

Course Admin Contact:
Megan Maxwell
mmaxwell@upenn.edu
215-662-4581

Requirements Prior to Start of Class:
Prior to the start of class students are required to:
- Determine a manuscript topic that has been pre-approved by their designated Research Mentor.
- The student should discuss the project with their Research mentor and have final “data lock” prior to the class.
- Students should also identify a reference manager (e.g. Endnote, or similar) that is used by their lab/PI and obtain a copy for the first session of class.

If students have any questions or concerns regarding these requirements, please contact the course director prior to the start of class.

Course Expectations:
Students will write a primary data manuscript for publication with their primary lab mentor. Emphasis will be placed on identifying publishable data that was either generated by the student, or which is made available to the student for analysis from the mentor’s lab (e.g. perform a new analysis across data from multiple studies, organize and analyze data that is ‘laying in wait’ for
someone to publish it).

The student will be expected to learn the role of first author including 1) coordination with the senior mentor to write the introduction, 2) organize data, analyses and figures; 3) obtain or write methods and results from collaborators; 4) writing a discussion and; 5) “getting it out the door”. The authorship for the publication is left to the discretion of the mentor in consultation with the originator of the data and the MTR student. This will both teach the student the value of publishing as an integral part of academic life, and will facilitate their success with subsequent grant applications.

The course director will provide guidance and critical review of work throughout the process. Mentors will be asked to agree to participate in this process, or identify another senior individual in their group who would perform the function. **Completion of the course and continuation of associated funding is contingent on submission of the manuscript.**

**Mentor Role in course (agreement from MTR Mentor Compact):**
In my capacity as research mentor, I will meet with the MTR appointee more often during the following time and course:

**Summer of MTR year 2, Primary Data Manuscript:** I will meet with my mentee weekly during the second summer of the program to guide in authoring a primary data manuscript in their proposed area of study for publication. If the mentee has not generated sufficient data to warrant publication within the first 12 months in the laboratory, I will provide access to a suitable data set. The authorship for the publication is left to the discretion of you as the mentor in consultation with the originator of the data and the MTR student. This will both teach the student the value of publishing as an integral part of academic life, and will facilitate their success with subsequent grant applications. My responsibilities will include guiding the mentee regarding both content and structure of the article, as well as teaching them how to identify a suitable journal and submit the finished manuscript for publication. Completion of the course and continuation of associated funding in my laboratory/program is contingent on submission of the manuscript.

**Attendance:**
Students are expected to attend all classes. If for any reason a student will not be in class, they should contact the instructor and MTR admin prior to class to alert them of the absence and make arrangements to make up course content.

**Grading:**
Students will be graded based on class attendance, participation, and submission of a final manuscript.
30% – Class Participation & Attendance
70% – Final Manuscript

**Academic Policies:**
For information on academic policies please refer to the MTR Student Handbook on the web:
http://www.itmat.upenn.edu/ctsa/mtr/
Course Timeline:
Below you will find an outline of basic course topics. This course layout is a guideline and topics may come up in weeks other than their designated time slot in the syllabus.

Week

1. **Tues May 26 and Thurs May 28**: Set scope
   a. Define scope and data
   b. Timeline – 5 weeks
   c. Statistics
   d. Outline
   e. Referencing

2. **Tues June 2/Thurs June 4**: Outline / reference manager / data lock and plan for analysis

3. **Tues June 9/Thurs June 11**: Figures, complete methods and results sections

4. **Tues June 16/Thurs June 18**: Introduction is done, discussion outline complete

5. **Tues June 23/Thurs June 25**: Final Draft – add abstract

6. **Tues June 30**
Steps to Publishing a Journal Article
by Karen I.Winey
March 2003

Compiling Data: In this stage of the process all pertinent data is gathered and organized into figures.
- Gather all pertinent data; do not omit any data at this point
- Develop a notation scheme for samples
- Create various figures and tables that include all the data.
- Draft figure captions to provide all the pertinent information regarding the experiment

Develop Conclusions: After the data is compiled, select the primary and secondary conclusions for the journal article within the context of the field.
- Identify the 10-15 most pertinent papers in the field
- Compile the primary and secondary conclusions of these papers
- Summarize these publications with respect to similarities and differences with our data
- Replot, reconfigure and/or reanalyze compiled data for easier comparison, as necessary
- Write a brief paragraph for all possible conclusions
- Consider additional experiments to strengthen these conclusions
- Select and refine primary (1-5) and secondary (1-5) conclusions
- Select journal for submission
- Select type of publication (note, article, communication)
- Write the title
- Select coauthors
- Enter paper on your resume and in Endnote as "in preparation"

Write Journal Article: Prepare a document for submission to the selected journal.
- Review requirements of the selected journal (format, page limits, bibliography format); this information is often available on-line or in the first issue of the year
- Outline paper keeping the primary/secondary conclusions in mind
  - More detail in the outline makes writing easier
  - Develop a logical sequence of information and arguments in the paper
  - Select and revise figures and tables for journal article
  - Select divisions of paper (i.e. introduction, experimental methods, etc.)
  - Decide where to introduce major references
  - Decide where to insert figures (this will set the sequence of figures)
  - Review outline for consistency in terms
- Prepare to write
  - Ensure that the bibliographic index (Endnote) is complete
  - Revise sample notation to better support conclusions
  - Revise figure captions to better support conclusions; note that figure captions are usually separated from figures in the manuscript
  - Select when and where you will write
Write Journal Article Continued:

Write the first draft according to the outline
If all the steps above have been thoughtfully done writing will be quick and fun
Begin by writing the easiest, clearest section
Rather than stopping a writing session at the end of section, try to write the first paragraph of the next section
Write quickly, knowing that you can and will edit later; you can even add the references later
Start with the familiar/simple and add layers of complexity as the paper progresses
Remember to state the obvious, without repeating the trivial
Use numerical data to support your points
Similarly, avoid vague words such as "very" and "higher" – be specific

Prepare draft for distribution: include title, authors and authors' affiliations, targeted journal, figure captions, figures and references; format references; check spelling and grammar

Give the first draft to at least one coauthor
Receive feedback about the first draft
Incorporate feedback from coauthor into second draft
Write the abstract; note the guidelines of the targeted journal
Revise the title, as necessary
Give the second draft to at least one coauthor
Receive feedback about the second draft
Incorporate feedback from coauthors in the next draft
Repeat revise/give/receive feedback steps until all coauthors are satisfied.

Submission and Review Journal Article: After the document is prepared, it is submitted to the journal for peer review.
Review the submission procedures for that specific journal (on-line or on paper); this information is often available on-line or in the first issue of the year
Select 1-4 suggested reviewers
Select contact author
Follow instructions for submission, which might include a cover letter from the contact author (see example A), a copyright form provided by journal, etc.
Record date and mode of submission
Inform coauthors of submission
Enter paper on your resume and in Endnote as "submitted"
Record confirmation of receipt including the assigned editor and manuscript number – usually with 7 days, otherwise contact journal.
Expect reviews with in a 6 weeks, otherwise contact editor
Distribute reviews (1-3) to all coauthors
Reread the manuscript, while considering the reviewer comments
Draft response to reviewer comments, typically this is done in an itemized list (see example B).
Revise manuscript and figures, as necessary
Distribute draft response to reviewers with all coauthors
Receive input from coauthors
Finalize response to reviewer comments
Finalize manuscript and figures
Follow instructions for sending the response to reviewer comments to the editor and for resubmitting the paper, which might include sending a disk, completing a form, etc.
Record date resubmission
Inform coauthors of resubmission
Enter paper on your resume and in Endnote as "resubmitted"
Expect acceptance within 2 weeks, unless editor contacts the reviewers again
Inform coauthors of acceptance
Enter paper on your resume and in Endnote as "accepted"

**Publication of Journal Article:** After a paper is accepted the manuscript is forwarded to a production team at the publisher during which time the manuscript is prepared for printing.
Expect page proofs from publisher
Distribute copies of page proofs to all coauthors, set the original page proof aside
Carefully read every word of the formatted article including title, authors and affiliations, figure captions, etc. noting corrections in colored pencil
Update bibliography where applicable; for example, change "submitted" to "accepted"
Respond to specific inquiries from the production team
Carefully inspect figures for reproduction quality
Compile corrections from all coauthors onto a single copy of the page proofs, reconciling any differences
Send the corrected page proofs and any additional information to the production team as instructed; clearly indicate whether or not you want to see the page proofs again before publication
Decide how many reprints to order and forward request to Towne business office
Decide how to pay for page charges and forward request to Towne business office
Enter paper on your resume and in Endnote as "in press"
Await publication date
Inform coauthors of publication, including the complete reference
Enter paper on your resume and in Endnote with complete reference
Await delivery of reprints
Distribute reprints to coauthors
Distribute reprints to interested colleagues
Provide feedback to Karen (& coauthors) about the process
EXAMPLE A: Draft Email for submission

April 6, 2014

Macromolecules
Timothy P. Lodge, Editor
Department of Chemistry
University of Minnesota
207 Pleasant Street SE
Minneapolis, MN 55455-0431

Dear Tim,

Attached you will find a manuscript that we are submitting to Macromolecules as an article. The title of the enclosed manuscript is, "Dynamics of kink bands in layered liquids: Theory and in Situ SAXS experiments on a Block Copolymer Melt," and my co-authors are Lei Qiao and David Morse. Correspondence should be sent to me at the following address:

Karen I. Winey
Materials Science and Engineering Department
University of Pennsylvania
3231 Walnut Street
Philadelphia, PA 19104-6272

winey@lrsm.upenn.edu
215.898.0593 phone
215.573.2128 fax

I appreciate your prompt handling of this manuscript and look forward to a successful review process.

Sincerely,

Karen I. Winey
EXAMPLE B: Draft email for resubmission and response to reviewers

July 13, 2001

Macromolecules
John T. Bendler, Associate Editor
Department of Chemistry/Chemical Engineering
South Dakota School of Mines and Technology
501 East Saint Joseph Street
Rapid City, SD 57701-3995

Dear John,

Attached you will find two copies of our revised manuscript (MA010611R) as well as our response to the reviewer comments.

Although I will be out of town correspondence should still be sent to me at the following address:

Karen I. Winey
Materials Science and Engineering Department
University of Pennsylvania
3231 Walnut Street
Philadelphia, PA 19104-6272

winey@lrsm.upenn.edu
215.898.0593 phone
215.573.2128 fax

I appreciate your prompt handling of this manuscript and look forward to reviewing the page proofs.

Sincerely,

Karen I. Winey
Response to Referee Comments
Insert Date

MA010611R
"Dynamics of kink bands in layered liquids: Theory and in Situ SAXS experiments on a Block Copolymer Melt"
Qiao, Winey and Morse

Referee 1: Publish manuscript without change
Response: none.

Referee 2:
(A) Discuss the assumption of well-developed kink bands in a matrix of parallel lamellae in relationship to Figure 4.
   Response: We have added a comment to the figure caption that describes the variety of matrix orientations observed near kink bands via SEM. The assumption of parallel lamellae is fully consistent with the azimuthal distribution in the SAXS data.

(B) Reference by Cohen, et al. reports dilation in a lamellar diblock copolymer under tension.
   Response: We added this reference to the conclusion section of the paper.

(C) Dilation of lamellae within the kink band should be commented upon.
   Response: We added a discussion of the competing forces on the lamellae to the analysis section of the paper.

(D) The model assumes no new kink bands are formed.
   Response: We have improved our discussion of this in the conclusion section of the paper.

(E) Add a t>0 schematic to Figure 1.
   Response: In fact, Figure 1 is for an arbitrary time, so it is not necessary to alter Figure 1.

(F) Specify that the 1st order reflection is obscured by the beamstop in Figure 3.
   Response: This is now explicitly stated in the text and in the figure caption.
1. Avoid Alliteration. Always.

2. Prepositions are not words to end sentences with.

3. Avoid cliches like the plague. They're old hat.

4. Comparisons are as bad as cliches.

5. Be more or less specific.

6. Writes should never generalize.

Seven: Be consistent!

8. Don’t be redundant; don’t use more words than necessary; it’s highly superfluous.

9. Who needs rhetorical questions?

10. Exaggeration is a billion times worse than understatement.