Course Title: Scientific Communication
Course Faculty: RA Miller, MD and ST Rosenbloom, MD, MPH
Launch Date: August 27, 2015

Learning Materials:

<table>
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<tr>
<th>Web sites</th>
<th>Major journal web sites, e.g., Ann Intern Med authorship requirements, N Engl J Med Author Center on how to prepare manuscripts, BMJ peer review training materials</th>
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<tbody>
<tr>
<td>Publications</td>
<td>Lester/White – Why Not Say it Clearly (out of print)</td>
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<td></td>
<td>Strunk &amp; White – The Elements of Style</td>
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<td>Media</td>
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Manuscript preparation:
1. Bredan AS, van Roy F. Writing readable prose: when planning a scientific manuscript, following a few simple rules has a large impact. EMBO Rep. 2006 Sep;7(9):846-9
3. Provenzale JM. Ten principles to improve the likelihood of publication of a scientific manuscript. AJR Am J Roentgenol. 2007 May;188(5):1179-82.

Graphical display: tables and figures
## Course Description: Scientific Communication, First Semester

| Module Topic       | Learning Objectives                                                                                                                                                                                                 | Structure of Manuscripts                                                                                                                                                                                                 | Submitting a Manuscript                                                                                                                                                                                                 |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------__________________________________________________________________________________________________________________________________________________________|
| **Introduction:**  | 1. Understand the purpose of publishing author and reader perspective  
2. Describe resources to find publications  
3. Understand the types of publications & presentation forms                                                                                                                                                        | 1. Describe the components of a scientific manuscript  
2. Describe the structure of each component  
3. Understand the purpose of each component                                                                                                                                                                          | 1. Understand the publication process from manuscript creation through publication.  
2. Describe how to prepare a publication for submission  
3. List and define the roles of the people typically involved with a peer-reviewed journal publication                                                                                                                                 |
| **Duration**       | 1 session – week 1  
3 sessions – weeks 2-4  
1 session – week 5                                                                                                                                                                                                 |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |
| **Required Resources** | PPT: Course Introduction and Why Publish  
Reading: King Chaps 1, 2, 3;  
PPT: Structure of Manuscripts  
DOC: Manuscript Style Importance of Sequence  
Reading: King Chaps 4-5;  
S&W Chaps 1, 2, 3  
BMJ Authorship Tutorials – See Course References  
DOC: Submission workflow template  
Reading: King Chaps 6, 7;  
S&W Chaps 4-5                                                                                                                                                                                                 |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |
| **Discussion Questions** | - Career and publication  
- How to plan writing for a publication  
- How to have fun and be successful with writing                                                                                                                                                                      | Technical versus creative writing  
"Writer’s block" and how to overcome it                                                                                                                                                                                                 | Dealing with your first five submissions: what to expect                                                                                                                                                                |
| **Assessment**     | 1. Writing Exercise 1A: Resources, journals in informatics, bibliometrics  
2. Writing Exercise 1B: Revise an NEJM abstract  
3. Exercise 2A: Revise own project summary  
4. Exercise 2B: Revise a colleague’s project summary  
5. Writing Exercise 2C: Revise a published abstract  
6. Obtain and read the instructions for authors from 2-3 different journals, including at least one in biomedical informatics and one outside the field |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |
<p>| <strong>Learner support</strong> | PubMed, Internet, local library                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |</p>
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<th>Module Topic</th>
<th>Oral Presentation Overview</th>
<th>Poster Presentations Overview</th>
<th>Abstracts</th>
<th>Graphical Presentation</th>
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| **Learning Objectives**      | 1. List the goals of an oral presentation.  
2. Describe the components of an oral presentation  
3. Understand the role of visual aids during an oral presentation  
4. Describe challenges associated with oral presentations  
5. Understand the audience & the environment | 1. List the goals of a poster presentation.  
2. Describe the structure and typical layout of a poster  
3. Describe some common challenges associated with poster presentations. | 1. Understand goals of abstracts  
2. Define the components of a structured abstract | 1. Understand the power of graphical information  
2. Describe tools available to create and manage graphics and slide presentations  
3. Understand the tips and challenges of presentation software |
| **Duration**                 | 1 (-2) session                                                                                  | 1 session                                                                                       | 1 session                                                                 | 1-2 sessions                                                                         |
| **Required Resources**       | LK 4,5,8; SW 3,4  
PPT: Presentation Oral Preparation  
PPT: Presentation Slides Case Report Improve |                                                                                                 | DOC: Abstracts Peds ED Example                                              | Graph: Napoleon's march to Moskow (in PPT)                                           |
| **Discussion Questions**     |                                                                                                 |                                                                                                 |                                                                           |                                                                                      |
| **Assessment (topic, time to complete)** | DOC: Oral Presentation: Exercise #1  
DOC: Tips for Poster Presentations (from MSTP Vanderbilt) |                                                                 |                                                                           | Share review of slides (7 slides/ 5 minutes)                                         |
<p>| <strong>Exercises</strong>                |                                                                                                 |                                                                                                 |                                                                           |                                                                                      |
| <strong>Learner support</strong>          |                                                                                                 |                                                                                                 |                                                                           |                                                                                      |</p>
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<th>Reference Management Tools and Tricks</th>
<th>Tables and Figures</th>
<th>Ethical Considerations</th>
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| Learning Objectives   | 1. Understand the purpose of citations, what and how to cite references.  
                        2. Describe how to format references.  
                        3. Understand the organizational approaches supported by reference management software.  
                        4. Describe the difference between and appropriate use of endnotes, footnotes and in-text citations. | 1. Understand appropriate use of tables and figures in manuscripts.  
                        2. Understand proper table and figure formatting, and how to align formatting with journal’s style. | 1. Understand the ethical considerations related to publications, manuscript preparation and submission.  
                        2. Describe authorship responsibilities.  
                        3. Understand the role of manuscript acknowledgements.  
                        4. Conflict of interest.  
                        5. Plagiarism. |
| Duration              | 1 session                              | 1 session          | 1 session              |
| Required Resources    | Instructions for authors  
                        UMLE  
                        NLM website  
                        Bibliometrics  
                        PPT: References  
                        DOC: References Exercise #1 | Papers: tables and graphs  
                        PPT: General Graph Tables | Papers  
                        DOC: Ethics Case Report |
| Discussion Questions  |                                        |                    |                        |
| Assessment (topic, time to complete) |                                        | DOC: Tables Exercise #1 | 7.                        |
| Learner support       |                                        |                    |                        |
| Interaction           |                                        |                    |                        |