Scientific Writing & Communication
for Informatics Students
BMI 570/670
Fall 2018 Online
Syllabus

COURSE DESCRIPTION
The focus of this course is scientific writing and communication. Students will prepare abstracts, papers and slides as well as learn about writing theses and capstones, scientific journal articles, and grant proposals. Topics will also include bibliographic database searching and presentations and posters for scientific meetings.

CREDIT HOURS
3.0 credit hours

PREREQUISITES
None. Enrollment is limited to admitted biomedical informatics students. Priority in registration is given to master’s and PhD students.

FACULTY INFORMATION
Kathryn I. Pyle, AMLS, MA
Assistant Professor, Medical Informatics & Clinical Epidemiology
BICC 505, 503-494-6058, pylek@ohsu.edu
Office Hours: By phone (by appointment) or email response usually within 24 hours

Guest Lecturer: Andrew Hamilton, MLS, MS, Reference Librarian, OHSU Library
Teaching Assistant: Kelly Gossen

COURSE OBJECTIVES
• Become more proficient in scientific writing and presentations.
• Know the basic requirements for preparing thesis and capstone proposals and final documents; writing biomedical journal articles; and preparing biomedical grant proposals.
• Understand the basics of MEDLINE searching and reference management software.
• Using the principles learned in the class, prepare and revise a term paper on a biomedical informatics topic of your choice as well as prepare a presentation on the same topic.

REQUIRED TEXTBOOK(S)

SUPPLEMENTAL MATERIALS
In addition to the textbooks, there is a bibliography of relevant writing and communications books, journal articles and Web sites located in the Course Materials section of BMI 570/670 on Sakai under Course Extras.
**GRADING POLICY**

This is a Pass/Fail course. Each written assignment or presentation will be awarded points, with a minimum of 70 points out of a possible 100 to pass. Written work that does not conform to the instructions may not receive full points. Late work will be marked down by 10% per week.

There are three types of graded assignments. Weekly assignments related to a biomedical informatics/bioinformatics research topic of your choice for which you will prepare a term paper and slide presentation are worth between 5 and 15 points each. Participation in the weekly discussions in the Forum section of Sakai is worth 1 point per week. It is expected that students will contribute to the discussions at a minimum of once per week to receive the full 10 points for the term. Submission of short writing or grammar exercises throughout the term is worth up to 15 points in total.

Graduate Studies in the OHSU School of Medicine is committed to providing grades to students in a timely manner. Course instructors will provide students with information in writing at the beginning of each course that describes the grading policies and procedures including but not limited to evaluation criteria, expected time needed to grade individual student examinations and type of feedback they will provide.

Class grades are due to the Registrar by the Friday following the week of finals. However, on those occasions when a grade has not been submitted by the deadline, the following procedure shall be followed:

1) The Department/Program Coordinator will immediately contact the Instructor requesting the missing grade, with a copy to the Program Director and Registrar.
2) If the grade is still overdue by the end of next week, the Department/Program Coordinator will email the Department Chair directly, with a copy to the Instructor and Program Director requesting resolution of the missing grade.
3) If, after an additional week the grade is still outstanding, the student or Department/Program Coordinator may petition the Office of Graduate students for final resolution.

1 For courses that are run by a specific department.
2 For the conjoined courses (course number is preceded by CON_ that are run by Graduate Studies.

**COURSE SCHEDULE/ASSIGNMENTS**

The material for each session will be posted by Wednesday at 5:00 am Pacific time at the latest. Each week, in the Course Materials section of Sakai, there will be one or more PowerPoint lectures to watch as well as readings, short writing or grammar exercises, and Forum discussion topics. There is also a written assignment most weeks that relates to the preparation of your term paper and slide presentation on your research topic.

The writing exercises and Forum discussion topics will be posted in the Course Materials area for that week as well as in the Submissions and Forum sections, respectively. The written assignments are described in detail below and are also described in detail in the Submissions section of Sakai. All written work and Forum discussion posts for a session must be submitted by 11:55 pm Pacific time on the due date to receive full credit. It is expected that you will submit at least one Forum discussion post per session. Written work should be submitted via the Submissions tool in Sakai. If you have difficulties submitting work through Sakai, you may email your assignment to me at pylek@ohsu.edu.

The primary written assignments in this course follow the iterative process of writing. Each assignment is an installment -- you will think up a fascinating biomedical informatics or bioinformatics topic, identify your sources, outline your structure, write an abstract, draft the first round, receive peer review, edit, finalize, *et voila* -- a seven-to-ten-page formal paper.

Please select a topic related in some way to biomedical informatics or bioinformatics and is a topic that you are not researching, developing, or writing about for another BMI course. Also, revising a paper
previously submitted in another course is not allowed.

**Basic Homework Requirements:** Please name your homework file with the following convention: LastnameSessionAssignment.doc  Example: SmithSession3References.docx or Jones Session5Exercise.docx. Please put your name and the date at the top of all written assignments. Once I download and print out an assignment for grading, I can’t tell whose it is without a name on it. For most assignments, you can use either single or double spacing. For the draft term paper and final version of the term paper, please use 1.5 or double spacing.

**Session One – September 24-October 3, 2018**
*Principles of Good Writing I*
Posted by September 24th - Due by October 3rd
Lectures: Lesson 1: Analyzing the Audience, Purpose, and Occasion; Lesson 2: Balancing Precision and Clarity; Lesson 3: Avoiding Ambiguity
Writing Exercise: Gunning Fog Index, 1 point
Forum Topic: Language goals in scientific writing, 1 point
Readings: Alley, Craft of Scientific Writing textbook, Lesson 1: Analyzing the Audience, Purpose, and Occasion; Lesson 2: Balancing Precision and Clarity; Lesson 3: Avoiding Ambiguity (pages 1-47)
Written Assignment: Analysis of Constraints Exercise, due October 4th, 5 points
Select a recent healthcare research study (findings released within the last three years) and find both the original study published in a biomedical journal and another (non-academic) article written about the study findings (for example, a news article in the New York Times or on BBC News on the Web).
For each document, identify the following constraints:
- Audience: Who is the audience? Why would they be reading the article?
- Purpose: Why was the article published?
- Occasion: What kind of language was used in the article? How formal is the language?
- Comparison: How do the constraints differ? How do you think the writing process differed for each document?
Please discuss the original research study first and provide citations for each document.

**Session Two – October 1-10, 2018**
*Principles of Good Writing II*
Posted by October 1st – Due by October 10th
Lectures: Lesson 4: Sustaining Energy; Lesson 5: Connecting Your Ideas; Lesson 6: Beginning with the Familiar
Writing Exercise: Sentence openers, 2 points
Forum Topic: Being familiar, 1 point
Readings: Alley, Craft of Scientific Writing textbook, Lesson 4: Sustaining Energy; Lesson 5: Connecting Your Ideas; Lesson 6: Beginning with the Familiar (pages 49-107)
Written Assignment: Summary of Paper Topic, due October 10th, 5 points
Write a paragraph or two explaining the proposed topic of your term paper. Include the draft title and some proposed sources. You can also say why you selected this particular topic, which should be related to biomedical informatics or bioinformatics in some way. Please select a topic that can be covered appropriately in a 7-10 page paper. I realize this is early in the term, and you may end up modifying your topic. This assignment gives you a chance to get started on your topic and gives me an opportunity to learn more about your interests and your writing style.

**Session Three – October 8-17, 2018**
*Bibliographic Database Searching and Citation Preparation*
Posted by October 8th - Due by October 17th
Session Four – October 15-24, 2018
Principles of Good Writing III
Posted by October 15th - Due by October 24th
Lectures: Lesson 7: Organizing the Content for the Audience; Lesson 8: Providing Proper Emphasis; Lesson 10: Using Your Writing Time Efficiently
Writing Exercise: Preparing an abstract, 2 points
Forum Topic: Getting ready to write, 1 point
Readings: Alley, Craft of Scientific Writing textbook, Lesson 7: Organizing the Content for the Audience; Lesson 8: Providing Proper Emphasis; Lesson 10: Using Your Writing Time Efficiently (pages 109-152, 199-226)
Written Assignment: Outline of Paper, due by October 25th, 5 points

Please submit a one-to-two-page, logically organized outline for your paper. You may choose the style of outline (based on those presented in the lecture). Provide enough detail so that the major sections and structure of your term paper are clear.

Session Five – October 22-31, 2018
Writing Thesis and Capstone Documents
Posted by October 22nd - Due by October 31st
Lecture: Thesis and Capstone Documents
Writing Exercise: Misplaced and Dangling Modifiers, 1 point
Forum Topic: Review of thesis proposals, 1 point
Readings: Shapiro and Betzing thesis proposals
Written Assignment: Abstract of Paper, due October 31st, 10 points

Please prepare a draft abstract of your paper, including a title. Your abstract should not exceed 250 words. You may use a descriptive, informative or structured (if applicable) abstract format.

Session Six – October 29-November 7, 2018
Writing Journal Articles
Posted by October 29th - Due by November 7th
Lectures: Preparing Journal Articles and Peer Review
Writing Exercise: Using Transitions, 1 point
Forum Topic: Critique of biomedical journal article, 1 point
Readings: How to write an article: Preparing a publishable manuscript; Reviewing manuscripts for biomedical journals
Written Assignment: None – work on your draft paper
Session Seven – November 5-14, 2018
Presentations and Posters
Posted by November 5th - Due by 14th
Lecture: Designing Posters
Writing Exercise: None
Forum Topic: Presentation style of DMICE thesis defense, 1 point
Readings: Alley, Craft of Scientific Presentations, chapters 1, 2, 5; BMJ article: How Not to Give a Presentation; The Scientist: Poster Perfect; CMAJ: Effect of colour coordination of attire with poster presentation on poster popularity
Written Assignment: Draft paper due by November 14th - 15 points – give copy to assigned peer reviewer

The first draft of your paper is due. The paper should be a minimum of seven pages and a maximum of ten pages, 1.5 or double-spaced (not counting the title page, abstract, or references). The draft should be complete (no missing sections) and include a title page, abstract and reference list. Please include page numbers.

Please create a title page with the title of your paper, your name, and the date. The title page does not count as one of the 7-10 pages of your paper.

The first item on the next page should be your abstract. An abstract is a summary of the contents of the paper: it is not a substitution for an introduction section in the paper. You should not have any content in the abstract that is not in the paper (although the wording does not have to be identical). Also, abstracts do not contain references; you should not begin citing reference numbers until the beginning of the paper itself. The abstract included in the draft paper should be revised from the one submitted in Session Five, based on feedback from the instructor.

Please use section headings in your paper.

Please use Vancouver style for your references. References should be numbered in the order they appear in the paper. Each reference keeps the same number, no matter how many times it is cited in your paper. Please use superscript numbers for your reference numbers in the body of the paper. When using the superscript reference numbers, the number goes after a period or comma, not before. So if the reference number is at the end of a sentence, for example, it should look like: …according to Brown et al.15 If you have a semi-colon, the reference number would be before the semi-colon.

The reference list at the end of the paper should list the references in the order they were cited in the paper. It is fine to use reference management software but please proof your list to make sure there are no errors.

You might want to take a look at one of these JAMIA papers to see how their references are formatted. However, please list 6 authors before “et al” instead of just 3. Also, I like periods with e.g. and i.e.

JAMIA bioinformatics paper sample (for formatting): ‘N-of-1-paths’ unveils personal deregulated mechanisms from a single pair of RNA-Seq samples: towards precision medicine
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4215042/

JAMIA clinical informatics paper sample (for formatting): A qualitative study of the activities performed by people involved in clinical decision support: recommended practices for success
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3994853/

Session Eight – November 12-21, 2018
Presentation Slides
Posted by November 12th - Due by November 21st
Lecture: Effective Presentations, parts 1 and 2
Writing Exercise: Faulty Parallelism, 1 point
Forum Topic: Evaluating the writing process for the draft term paper, 1 point
Readings: Alley, Craft of Scientific Presentations, chapters 3-4
Written Assignment: Review of another paper, due by November 21st, 5 points

You will exchange draft papers with another student and provide a peer review of that person’s paper, using a peer review form. Reviewer assignments will be made by the instructor partway through the term. The credit for this assignment is for you doing a review of another person’s paper. A copy of the completed peer review form must be sent to both the author of the paper and to the instructor.
Session Nine – November 19-29, 2018

Grant Proposals
Posted by November 19th - Due by November 29th
PowerPoint Lecture: Preparing Proposals
Writing Exercise: Review of grant proposal, 2 points
Forum Topic: Research topic, 1 point
Readings: Alley Craft of Scientific Writing textbook, Lesson 9, pages 174-198
Written Assignment: PowerPoint slides – due Thursday, November 29th by 5pm Pacific time, 15 points

Using Echo360, prepare an oral presentation with voiceover on your paper topic, using the Alley format presented in class (sentence headlines, images, no bullets). You should prepare enough slides for a 7-10 minute talk, as if you were presenting at an American Medical Informatics Association meeting, and your talk should have a beginning, middle and end (summary). More information on preparing the slides will be provided later in the term. The slides will be posted in Sakai and you will be asked to critique other students’ presentations. Instructions for using Echo 360 are found in Course Materials.

Session Ten – November 26th-December 7th, 2018

Student Presentations
Posted by November 26th - Due by December 7th
View Student PowerPoint Slides
Writing Exercise: Critique of other students’ slides
Forum Topic: How has your communication changed, 1 point
Written Assignment: Final Paper due by Friday, December 7th, 10 points

Based on the feedback from both Kathryn and your peer reviewer, please revise your draft paper and submit it by 11:55 p.m. Pacific time on Friday, December 7th. Remember to include a title, the abstract, and references (in Vancouver style) and number your pages.

SUMMARY OF POINTS PER SESSION

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<td>Outline for Paper</td>
<td>Preparing an abstract</td>
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<td>No written assignment, work on draft paper</td>
<td>Using Transitions</td>
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<td>Draft Term Paper</td>
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<td>Discussion of Thesis Presentation</td>
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COPYRIGHT INFORMATION
Every reasonable effort has been made to protect the copyright requirements of materials used in this course. Class participants are warned not to copy, audio, or videotape in violation of copyright laws. Journal articles will be kept on reserve at the library or online for student access. Copyright law does allow for making one personal copy of each article from the original article. This limit also applies to electronic sources.

To comply with the fair use doctrine of the US copyright law, Sakai course sites close three weeks after grades are posted with the Registrar. Please be sure to download all course material you wish to keep before this time as you will have no further access to your courses.

DMICE COMMUNICATION POLICY
1. If the syllabus directs the student to contact the TA before contacting the instructor, the student should do so. Otherwise, the student should contact the instructor and allow 2 business days (not including weekends) for a response.
2. If the student does not receive a response from the instructor within 2 business days, s/he should contact the TA (if there is one). When contacting the TA s/he should cc the instructor and Diane Doctor at doctord@ohsu.edu.
3. If a student does not receive a response from the TA within 1 business day (not including weekends), s/he should contact Diane Doctor at doctord@ohsu.edu and cc the instructor and the TA.
4. If Diane does not reply within 1 business day (not including weekends), the student should contact Andrea Ilg at ilgan@ohsu.edu.
5. Students having difficulties with Sakai should contact the Sakai Help Desk at sakai@ohsu.edu or at (877) 972-5249. Sakai help is available M-F from 8am to 9 pm and weekends from Noon to 5pm. Do not contact the instructor.

Please use professional etiquette when communicating with peers and the instructor. This means avoiding aggressive or offensive language, showing respect for others’ opinions and positions, and conducting yourself as if you were face-to-face with them. Please pay special attention to etiquette in class forums and when using email. If you notice someone violating this policy, please make the instructor and TA aware of the problem.

SYLLABUS CHANGES AND RETENTION
This syllabus is not to be considered a contract between the student and the School of Medicine. It is recognized that changes may be made as the need arises. Students are responsible for keeping a copy of the course syllabus for their records.

SYLLABUS STATEMENT REGARDING DISABILITY SERVICES
OHSU is committed to providing equal access to qualified students who experience a disability in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (ADA-AA) of 2008. If you have a disability or think you may have a disability (physical, sensory, chronic health, psychological or learning) please contact the Office for Student Access at (503) 494-0082 or studentaccess@ohsu.edu to discuss eligibility for academic accommodations. Information is also available at www.ohsu.edu/student-access. Because accommodations may take time to implement and cannot be applied retroactively, it is important to have this discussion as soon as possible. All information regarding a student’s disability is kept in accordance with relevant state and federal laws.

COMMITMENT TO EQUITY AND INCLUSION
Oregon Health & Science University is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you encounter sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin or ancestry, veteran or military status, sex, marital status, pregnancy or parenting status, sexual orientation, gender identity, disability or any other protected status please contact the Affirmative Action and Equal Opportunity Department at 503-494-5148 or aaeo@ohsu.edu. Inquiries about Title IX compliance or sex/gender discrimination and harassment
may be directed to the OHSU Title IX Coordinator at 503-494-0258 or titleix@ohsu.edu

ACADEMIC HONESTY
Course participants are expected to maintain academic honesty in their course work. Participants should refrain from seeking past published solutions to any assignments. Literature and resources (including Internet resources) employed in fulfilling assignments must be cited. See http://www.ohsu.edu/xd/education/library/research-assistance/plagiarism.cfm?WT_rank=1# for information on code of conduct for OHSU and http://www.ohsu.edu/xd/education/teaching-and-learning-center/for-students/index.cfm for more information on citing sources and recognizing plagiarism.

In an effort to uphold the principles and practice of academic honesty, faculty members at OHSU may use originality checking systems such as Turnitin to compare a student’s submitted work against multiple sources.

To protect student privacy in this process, it will be necessary to remove all personal information, i.e., student name, email address, student u-number, or any other personal information, from documents BEFORE submission.

USE OF SAKAI
This course will have an online component, which can be accessed through Sakai, OHSU’s online course management system. For any technical questions or if you need help logging in, please contact the Sakai Help Desk.

Hours: Sakai Help Desk is available Mon – Fri, 8 am – 9 pm, and weekends, 12 pm – 5 pm, Pacific Time.
Contact Information:
Phone (toll-free): 877-972-5249
Web: http://atech.ohsu.edu/help
Email: sakai@ohsu.edu

OHSU PROCTORING POLICY
It is OHSU policy that any exam offered online and worth more than 10% of the final course grade must be virtually proctored. In this course, if virtual proctoring is needed, we will be using the services of Examity, a remote proctoring service. You will be required to schedule your exam three (3) weeks ahead of time. There is no cost to the student. More information will be provided to you regarding setup, scheduling, and requirements in the Course Materials, if virtual proctoring is needed.

DOWNLOADING COURSE CONTENT
Students are encouraged to download and save course content (excluding videos) from each class in Sakai while you are taking the class if you think you will want to refer to it later. This is especially important for PhD students who will need to review content prior to taking the qualifying exam.

INCLEMENT WEATHER POLICY
When the weather forecaster is calling for ice or snow, call the OHSU Alert Line, 503 494-9021, for information regarding weather conditions that may affect operations at OHSU. This hot line will offer specific recorded messages for road conditions on OHSU’s Marquam Hill and West campuses (option 1), and for patients (option 2), students (option 3) and employees (option 4).

If extreme weather conditions present potentially unsafe situations, the provost of the university may choose to delay or cancel classes, or alter office and research activities. If classes are canceled or delayed, residents and students who have patient care responsibilities must meet those obligations.
For more information, please view the website http://www.ohsu.edu/xd/about/visiting/weather/index.cfm or call the above hotline.

Date of this version: 9/13/18