**CHEM/MATH/QSB/PHY 270: Academic Writing in Graduate Studies**

Spring 2014

Instructor: Dr. Anne Zanzucchi

Office Hours: Mondays from 9:00-11:00am (and by appointment)

Office Location: COB 343

Email: azanzucchi@ucmerced.edu

Phone: (209) 228-4173

*Please feel encouraged to visit office hours with any questions you have about assignments, to gain feedback on your writing, or to discuss your progress in the course. If you cannot attend office hours, we can schedule an appointment for another time*.

***Course Description and Outcomes***

**Course Catalog Description:** This course is designed to increase the writing proficiency of incoming graduate students, with a focus on strategies for reading critically, organizing and developing thoughts, choosing appropriate vocabulary, and generating and revising writing in a given scientific field.  Course topics address scientific disciplines, and projects may include writing abstracts, research reports, literature reviews, posters, and/or grant proposals.

**Learning Outcomes:** By the conclusion of this course, students will be able to (1) summarize and evaluate information, (2) demonstrate skillful use of credible and relevant sources to develop ideas and establish background, (3) communicate own research objectives and content expertise effectively within a range of science writing genres, (4) present content in an appropriate professional style and grammatically correct format, (5) provide substantial and relevant feedback to peers about their writing, and (6) develop and revise formal scientific writing. *Course learning outcomes are an extension of associated program learning outcomes from participating Natural Sciences graduate groups.*

***Policies***

**Pre-requisites:** Graduate standing; enrollment priority given to School of Natural Sciences graduate group students. This course may be audited by post-doctoral students with consent of the instructor.

**Credit Hours and Time Commitment:** With this being a two-unit course, graduate students are expected to dedicate at least four hours of preparation time for each week’s class meeting. This time allocation may be used for homework assignments, readings, drafting, and/or contributions to peer work.

**Attendance and Participation:** This seminar is workshop-focused and convenes once a week, so in-class activities will be an essential aspect of your learning. You are expected to attend all class sessions. Absences exceeding three per semester (amounting to 20% of course time) will result in either an incomplete, withdraw or fail. To see timelines for grading procedures, please visit the following [link at the Registrar’s Office](http://registrar.ucmerced.edu/policies/adddropwithdraw).

**Deadlines**: In the interest of fairness to all students, we enforce strict guidelines for submitting work on time. For paper-based assignments, materials should be submitted by the author during class-time. Similarly, electronic assignments must be submitted by the author by the assigned time. If you are having significant difficulty meeting a deadline, please contact me to discuss options. Please note that late assignments are generally not accepted. If an assignment is submitted (with permission) late, the grade may be reduced by a step per day.

**Academic Integrity Policy and Practices:** Plagiarism is an issue that is as complicated as linguistic expression is nuanced. For our purposes, plagiarism entails representing another’s work as your own. Note that plagiarism includes:

• submitting work that is done in part by someone else

• paraphrasing or summarizing any source without referencing it

• copying any source without using quotation marks or block indentation

In sum, if you submit your own work with all outside sources or ideas properly documented, you will have maintained academic honesty. The integrity of your ideas rests on maintaining scholarly habits and working closely with experts; it is important to ask questions and to research actively with detailed notes. Remember that research writing is a thinking process, so you should engage with resources as though you were in a scholarly conversation. For more information, please see the University of California policy at <http://www.ucop.edu/ucophome/coordrev/ucpolicies/aos/uc100.html>

***Academic Support and Course Resources***

**Special Needs & Disability Services:** UC Merced provides individuals with disabilities reasonable accommodations to participate in educational programs, activities, and services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should contact the professor as early as possible, and also contact the UCM Disability Services Center located in Room 107 of the Kolligian Library (209-381-7862) to obtain their assistance and coordination in working with this course. For more information, please see <http://disability.ucmerced.edu/>

**Shared worksite:** Our course management system and collaborative workspace is Canvas. Our address is: <https://ucmerced.instructure.com/courses/98>

**Listed Readings:** For participants to have a common understanding of foundational topics, some readings are listed for collective discussion. Please check the Files folder in Canvas for PDF copies of assigned articles and chapters.

**English Language Institute:** This course is designed to benefit native and non-native speakers of English alike. At times, we will work on grammar exercises to build an awareness of syntax; at other times, we will attend to rhetorical conventions that are specific to academic culture in American universities. Staff from the English Language Institute may participate in supporting students from this course, with consultations, support resources, and specialized workshops focused on linguistics.

***Evaluation and Course Projects***

**Overview of Assignments and Grades:** The research writing process will be divided into predictable sections, including an abstract, introduction, methodology, results, and discussion/conclusion. The syllabus is organized around those stages of development, which are roughly parallel to technical papers, articles, and conference presentations.

The following grading rubric summarizes standards and criteria for project evaluation.

**Grading Rubric**

|  |  |
| --- | --- |
| A+/A | Excellent Product (Written) or Performance (Spoken). Evidence of significant care given to the construction and delivery of a text. Also meets the highest standards for coherence, cohesion, style, logic, and discussion of the assigned topic. Evidence of substantive, thoughtful, effective revision. |
| A- | Superior work, but with occasional minor flaws in execution. Meets the highest standards for evaluation in most but not all categories of coherence, cohesion, style, logic, and discussion of the assigned topic. Revised effectively but a few minor problems may remain unaddressed. |
| B+ | Above average work that lacks excellence in several categories of coherence, cohesion, style, logic, and discussion of the assigned topic. Revision improves some features of the text without significantly improving overall quality. |
| B/B- | Above average work that exhibits few if any features of excellence. Some weaknesses in coherence, cohesion, style, logic, and discussion of the topic may be circumvented or not addressed. Revision incorporates feedback with some evidence of additional effort. |
| C+ | Average work that is commendable in meeting all baseline standards. Some strong points are apparent in coherence, cohesion, style, logic, and discussion of the topic, but these strengths are offset by many weaknesses in the text. Although not perfunctory, revision shows minimal effort in responding to feedback. |
| C/C- | Borderline but satisfactory work. The writer may need to apply considerable effort in meeting baseline standards for coherence, cohesion, style, logic, and discussion of the topic. Revision may be needed in all areas before a text becomes satisfactory, and specific problems may remain that distract a reader. However, in general the text can be read without significant disruptions in a reader’s understanding of the writer. |
| D+ | Below average work that does not meet minimal standards in several areas of text construction but will exhibit occasional strengths for future development. Revision is incomplete or inconsequential, and the reader is forced to resolve basic problems of interpretation. |
| D/D- | Far below average work. This grade typically characterizes inadequate effort rather than lack of development as a writer. Little or no revision has been attempted, and some changes the writer makes may have a significantly negative effect on the overall quality of a text. A reader will have recurring problems understanding the text. |
| F | Unacceptable work. Assignment is not submitted or does not follow directions. Students receiving an F have earned this grade due to negligence, indifference, or an unwillingness to learn. It should not represent a writer’s lack of ability or relative stage of language development. |

As the following list of projects indicates, CHEM 270 is a writing-intensive course with 5,000-7,000 drafted words. Grades are assigned on a 100 point scale.

**Activities Points**

|  |  |
| --- | --- |
| Writing study plan and notebook | 15 |
| Introductions (activity + revision of manuscript) | 15 |
| Abstracts (Annotated bibliography with 3-4 abstracts) | 15 |
| Background and significance | 15 |
| Project proposal (revised writing study plan) | 10 |
| Final project (grant fellowship proposal, poster presentation, or conference proposal) | 20 |
| Activities (peer review, discussions, group work, etc.) | 10 |

**Total points 100**

Independent scholarship involves a complex set of planning and writing strategies. In this course, major projects require pre-writing activities to introduce and establish the writing process. Further, pre-writing activities will inform your professor about potential learning needs to structure support and activities. The following ***pre-writing activities*** are described as the following:

**Activities: Group Assignments and Peer Review Feedback (10 points):** Composition research demonstrates that students (at all levels) learn more about writing conventions and revision from giving feedback than from receiving instructor feedback alone.[[1]](#footnote-1) This learning outcome applies equally between native and non-native speakers of English. Thus, your feedback to each other is formative and valuable, so your peer review contributions will be evaluated for consistency and quality. Please note that feedback is focused on evaluating the quality of your peer’s writing; support activities and classroom exercises will assist in strengthening your skills in evaluating writing.

**Introduction diagnostic activity (5 points):** A diagnostic activity is an important means for you and your instructor to benchmark writing goals for the semester. In this class, we will review and correct introduction drafts to identify how scientific writing is organized and communicated. This is a preparatory activity for significantly adapting and revising your manuscript’s introduction.

***Writing projects*** are described as the following:

**Writing study plan (10 points):** This first assignment provides you with an opportunity to identify and describe a final, culminating written project. Consider what is most relevant to your writing goals for your early career in graduate school. Options include a graduate fellowship application, a research poster presentation, or a conference paper proposal.

Also embedded in this assignment will be an ongoing notebook, which is essentially a log containing a summary of key updates, questions, and learning processes related to developing a cumulative project. Initial entries will be prompted, and then students will be expected to complete summaries and reflections independently (about 100-250 words).

**Introduction for a Research Report (10 points):** A diagnostic activity will allow us to review the structure of research reports, see above. We will then review a previous manuscript’s introduction and plan a significant review according to these guidelines. A potential alternative assignment will be to plan and draft a brief introduction to an incomplete research paper; please consult with instructor if this is a more appropriate avenue to complete this assignment.

**Abstracts / Annotated Bibliography (15 points):** An annotated bibliography is an important note-taking system for developing a scientific paper, particularly with establishing background and articulating a significant contribution. Beginning in Module 2, students will abstract three articles from an area of interest or expertise to present to peers. The presentation will be a five-minute overview at the beginning of class, with time for questions and a one week revision opportunity for final grade. These annotated bibliographies and presentations are the basis for projects later in the semester, including the abbreviated literature review and final project.

**Background and Significance Statement (15 points):** Working in small groups from the annotated bibliography project, graduate students will review articles in a given topic area and identify trends or interesting differences for further inquiry. Annotated bibliographies will be the primary source of content for the background and significance statement, with analysis and synthesis as a primary focus in drafting this review. Discussion will focus on exemplars in published studies to situate writing goals for this assignment.

**Final Project Proposal (5 points):** The proposal is based on the writing study plan and is condensed and limited to 250 words; it should summarize the final project’s content, focus, and hypothesis. The proposal should also briefly address how your selection of topics for course assignments (introduction revision, annotated bibliography, and background & significance statement) will contribute to the quality of this final project. In essence this summary is both your topic and plan for course assignments, with a selected final project that is most applicable to writing project needs in the first year of graduate school.

**Final Project (20 points):** Your final project reflects what was proposed at the beginning of the semester. You will work with peers focused on similar genres, with assigned readings about research posters, conference proposals, and fellowship applications (letters of intent). Criteria for review will be reflective of the genre and part of peer review checklists.

**Central Textbook:**

Hofmann, Angelika. (2009). *Scientific Writing and Communication: Papers, Proposals, and Presentations*. New York: Oxford University Press.

# \*Selected readings will be available in “Files” folder of Canvas.

# \*A new edition of the book is available (2013), which you are welcome to consult as a resource.

***Weekly Schedule & Course Activities***

\*Unless otherwise noted, all activities and assignments are due by 9am Wednesdays

\*Schedule is subject to change

**Module 1, Modeling Standards and Establishing Project Goals**

***Week 1, Jan 24:*** *Introductions*

Activities:Visit Canvas site <<https://ucmerced.instructure.com/courses/98>>

Review and summarize syllabus with guest instructor, email any further questions

Review first assignment, manuscript submission and summary comments (by 9am 1/29)

Complete entry survey questions (by 9am 1/29)

Homework: Read and annotate “[The Science of Scientific Writing](http://www.americanscientist.org/issues/id.877,y.0,no.,content.true,page.1,css.print/issue.aspx)” (Gopen & Swan, 1990)

Upload previous manuscript in Assignments, summarize writing goals in “Comments”

***Week 2, Jan 31****: Setting Goals and Establishing Writing Study Plan*

Projects due: Entry survey questions submitted

Manuscript draft uploaded with brief summary of goals

Activities: Identify scientific writing goals via Gopen & Swan reading

Review principles of note-taking and associated assignments

Distinguish indicative and descriptive abstracts

Review and schedule annotated bibliography assignment

Homework: Review bibliography of posted manuscript and select three foundational studies for annotated bibliography project

Post in Projects folder full-text PDF copies of three foundational studies, with complete notes for one article

Read and annotate Hofmann’s “Abstracts” chapter (see Canvas, Files)

***Week 3, Feb 7:*** *Reviewing Analytical Reading Strategies and Scientific Paper Structure*

Project due: Identified and posted three foundational studies, with one set of reading notes

Activities: Discuss reading strategies and note-taking techniques, based on submitted projects

Review IMRaD structure and organization of introductions

Building a model: Review of sample textbook introductions to provide feedback

Homework: Diagnostic activity on introductions (complete before peer review)

Review partner’s introduction from submitted manuscript and provide feedback

***Week 4, Feb 14****: Establishing Peer Review Feedback Standards and Protocols*

Activities: Identify stylistic goals for introduction

Discuss global and local revision strategies for introduction draft

Review your own introduction and peer feedback, provide summary comment

Homework: Review partner’s Draft 2 introduction and provide feedback

Review your own introduction and peer feedback, provide summary comment

Read Hofmann’s “Background and Significance” chapter (Canvas, Files)

**Module 2, Summarizing and Analyzing Scholarly Sources**

In this part of the course, we will be rotating responsibilities for presenting individual annotated bibliographies and creating background and significance sections based on these reading notes. We are drafting individual annotated bibliographies and presenting in teams. (Teams are based on common interests or related disciplines to create discussion and potential intersections.) Once you have presented your annotated bibliography, you will draft a background and significance section of a technical paper primarily summarizing and contextualizing these sources. The final drafts of your annotated bibliography and this section are due as a final project at a specified date (see chart below).

\*For scheduled responsibilities and deadlines, please consult the following chart

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Week 5 (2/21) | Week 6 (2/28) | Week 7 (3/7) | Week 8 (3/15s) |
| Team A | present ABib | draft B&Sign | Qs for Team C | PR Team C’s B&Sign |
| Team B | Qs | present ABib | draft B&Sign | Qs for Team D \* |
| Team C | Qs for Team A | PR Team A’s B&Sign | present ABib | draft B&Sign |
| Team D | Qs | Qs for Team B | PR Team B’s B&Sign | present ABib |

**\***Team B peer reviews Team D’s B&Sign draft during week of 3/21

***Week 5, Feb 21:*** *Drafting Annotated Bibliographies and Mapping Background*

Activities: Annotated bibliography presentation, Team A

Synthesis questions from Team C, with open forum

Establish goals for background/significance

Homework: Read sample [Paper of the Week](http://www.jbc.org/potw) from *Journal of Biological Chemistry*

**Module 3, Establishing Background & Significance**

We will be practicing analysis and synthesis by developing background & significance statements; this is part of the above annotated bibliography project.

***Week 6, Feb 28:*** *Presenting literature, Identifying significance*

Activities: Annotated bibliography presentation, Team B

Synthesis questions from Team D, with open forum

Homework: Read and annotate sample [Mini Review](http://www.jbc.org/content/by/section/Minireviews) from *Journal of Biological Chemistry*

***Week 7, Mar 7:*** *Presenting literature, Identifying significance*

Activities: Annotated bibliography presentation, Team C

Synthesis questions from Team A, with open forum

Homework: Review and annotate field specific style guide

***Week 8, Mar 15:*** *Translating Research Background into Significance Statements*

Activities: Annotated bibliography presentation, Team D

Synthesis questions from Team B, with open forum

Homework: Read and annotate sample [PLoS Neglected Tropical Diseases](http://www.plosntds.org/) article

***Week 9, Mar 21:*** *Exploring Publishing Goals*

Activity: Library Visit, with Susan Mikkelson and Emily Lin: Publishing paradigms

Homework: Read and annotate Hofmann’s “Letters of Inquiry and Preproposals”

**\*\*\**Spring Break*\*\*\***

**Module 4, Proposing and Marketing Scientific Projects**

In this final portion of the course, we will be extending discussions about publishing paradigms to consider how science is marketed and communicated to a wide audience. Your final project may include a graduate fellowship application, a research poster presentation, or a conference paper proposal.

***Week 11, Apr 4:*** *Developing Final Project Proposal*

Projects due: Finalized annotated bibliography + background & significance statement projects

Activities: Re-visit writing plan and notes to plan a final project proposal

Outline elements of grant inquiry letters and pre-proposals

Homework: Depending on project, review chapters on writing grants, poster presentations or conference paper proposals

***Week 12, Apr 11:*** *Developing Final Project Proposal*

Project due: Draft 1 of final project proposal

Activity: Peer review final project proposal

Homework: Read and annotate Bazerman’s “Financing Technological Enterprises”

***Week 13, Apr 18:*** *Exploring Scientific Style and Voice*

Project due: Draft 2 of final project proposal

Activity: Grammar review of final draft, modeling hedging and significance statements

***Week 14, Apr 25:*** *Developing Final Project*

Project due: Draft 1 of final project

Activity: Peer review final project

***Week 15, May 2:*** *Presenting Final Projects*

Project due: Draft 2 of final project

Activity: Peer review final project

Homework: Complete exit survey

***Week 16, May 9:*** *Concluding Reflections*

Activities: Presentation of final projects

Final review of writing goals

Review of entry and exit survey data

Course evaluation

1. Lundstrom, K. & Baker, W. (2009). To give is better than to receive: The benefits of peer review to the reviewer’s own writing. Journal of Second Language Writing. 18, 30-43. [↑](#footnote-ref-1)