Chemistry 360 Writing for Chemists
Spring 2010

Instructor:	Dr. Gregorio Santillan
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Class meetings:	MWF 9:50-11:00 AM in Physical Sciences 155
Textbooks:	*Write Like a Chemist,* M. Robinson, et. al., 2008. (required) *The ACS Style Guide,* A Manual for Authors and Editors, 2nd Ed., J. S. Dodd, Ed., ACS, 1997. (recommended)
Resources:	MBRS Writing Support Program, Physical Sciences 512. University Writing Center, JFK Library, Palmer 2097 www.calstatela.edu/centers/write_cn/

Course Description
Chemistry 360 provides a formal introduction to scientific writing for students majoring in the sciences. Students practice writing in different scientific genres, with particular emphasis on writing a research paper and its various components such as the abstract, introduction, experimental, results, discussion, and reference sections. The course also includes lecture instruction and assignments in literature review, reading skills, poster presentations, oral presentations, and ethics in science.

Course Objectives
The main objective of Chemistry 360 is to develop student knowledge of and ability in scientific writing. Related objectives include developing student understanding of how to search and read the literature and how to communicate scientific results in other formats besides a research paper, i.e., via oral and poster presentations.

The writing goals for this course are listed below in several broad categories:

1) **Rhetorical Knowledge**. Students will learn the main features of writing, the main uses of writing, and the expectations of readers in the chemical sciences.
2) **Critical Thinking, Reading and Writing**. Students will learn the uses of writing as a critical thinking method; the interaction of critical thinking, critical reading, and writing; and the relationships among language, knowledge and power in the chemical sciences.
3) **Process**. Students will learn to build final results in stages, to review work in progress in collaborative peer groups for purposes other than editing, to save extensive editing for later parts of the writing process, and to apply the technologies commonly used to research and communicate in the chemical sciences.
4) **Knowledge of conventions**. Students will learn the conventions of usage, specialized vocabulary, format, and documentation in the chemical sciences and strategies to better control those conventions.

Tentative schedule

Week	Date	Topics	Reading due	HW due
1	29-Mar	Introduction to CHEM 360		
1	Mar 31	Cesar Chavez Holiday		
1	Apr 2	University Furlough		
2	Apr 5	Literature Citations and References	WLC Ch17, (ACS pp. 173-229)	
2	Apr 7	Analysis of Writing	WLC Ch1	Quiz 1
2	Apr 9	Overview of the Journal Article	WLC Ch2 pp. 33-36 and pp. 44-52, (ACS pp.17-25)	WLC Ex. 1.1-1.2
3	Apr 12	Target and Critical Reading	TBA	Topic Selection
3	Apr 14	Style and Concise Writing	WLC Ch2 pp. 36-44, Appendix A	WLC Ex. 2.5
3	Apr 16	Library Information Literacy (Meets in Library)	TBA	TBA
4	Apr 19	Library Information Literacy II (Meets in Library)	TBA	Database Search
4	Apr 21	Personal Furlough		
4	Apr 23	Experimental Section	WLC Ch3, (ACS pp. 107-170)	WLC Ex. 3.1-3.2
5	Apr 26	Experimental Section II	WLC Ch16, (ACS pp. 107-170)	WLC Ex. 16.3
5	Apr 28	Results Section	WLC Ch4, (ACS pp. 1-17)	Quiz 2
5	Apr 30	Poster Presentations	TBA	
6	May 3	Results Section II	WLC Ch4, (ACS pp. 249-279)	WLC Ex. 4.1, 4.2, 4.5
6	May 5	Group Peer Evaluation of Experimental Section		Quiz 3
6	May 7	Discussion Section; Group Peer Evaluation of Results Section	WLC Ch5	Experimental Section
7	May 10	Discussion Section II,	WLC Ch5	WLC Ex. 5.1
7	May 12	Introduction Section	WLC Ch6	Results Section
7	May 14	Introduction Section II; Group Peer Evaluation of Discussion Section	WLC Ch6	WLC Ex. 6.2, 6.10
8	May 17	Oral Presentations	TBA	Poster evaluation
8	May 19	Abstract	WLC Ch7	Quiz 4
8	May 21	University furlough		
9	May 24	Personal Furlough		
9	May 26	Group Peer Evaluation of Abstract and Introduction Sections		
9	May 28	Title and Resumé and Group Peer Evaluation of Title and Resumé	WLC Ch7	WLC Ex. 7.1-7.2

10	May 31	Memorial Day Holiday		
10	Jun 2	Proof Reading and Editing	WLC Ch18	Abstract & Introduction Sections
10	Jun 4	Ethics in Science; Group Peer Evaluation of Final Drafts	Handout	Resumé Final Paper
11	**Jun 9**	**Final exam 8:00 – 10:30 AM**		

Grading

Your grade will largely be based on the following components:

Component	pts
Database search	10
Quizzes	40
Paper sections	80
Resume	10
Group peer evaluations	30
Poster evaluation	10
Final paper	100
Final exam	50
Total	**330**

Class attendance and participation will be considered in the final grade, and this course will be graded using the A-F, +/- scale. Students must turn in the Final paper and take the Final exam to avoid an automatic "F" in the course. The final exam will be based on the reading, lecture material, and homework problems.

Dropping, Incompletes and Withdrawals

Hopefully nobody drops this course. Before you consider withdrawing from a course, you should be aware of the University Policy on withdrawal: you are not allowed to drop a course because you have found the workload to be too heavy, or because you are getting a poor grade. It is your responsibility to be aware of all University policies and deadlines. Also, you should be aware that there are specific policies on the Incomplete grade. It is not automatically given; you must request it from your instructor who is not allowed to give an Incomplete grade unless certain conditions are met, such as the student must currently have a grade of C or better, and a justification based on illness, accident, or other emergency situation. Consult the schedule of classes and your University catalog for details.

Assignments

The schedule gives the due dates for completing assignments, such as the reading, recommended exercises, quizzes, parts of the final paper, and other work. WLC refers to the textbook *Write Like a Chemist* and ACS refers to *The ACS Style Guide*. WLC Ex. refers to the Exercises found in the WLC textbook chapters. Quizzes will be based on the reading, lecture material, and assignments. For the parts of the final paper and other written work, each student will turn in individual work that will undergo review by your peers (classmates), similar to how papers and grants written by professional scientists undergo peer review. The points for reviewing peer work falls under the Group peer evaluation component. The sections of the paper will be combined into the final paper (see below). Other work includes topic selection, database search, evaluation of a poster, and any

additional assignments given during the quarter. Assignments not turned in by the beginning of class on the due date will be considered late, and late work will be marked down one point each day until turned in.

Final paper

A significant part of your grade will come from your final research paper, including the drafts of various sections. Your research paper will be based on your choice among several canned research projects that will be provided. You will turn in drafts of sections of the paper, revise them as necessary after peer review and my review, and combine them into the final paper. The final paper must be typed, double-spaced, 1-inch margins, 12-point Times or Times New Roman font, and 6-12 pages in length. You may find a chemical formula drawing program to be helpful (check the Chemistry Department computer lab). The final paper will consist of the following sections:

1. Title
2. Your name and affiliation
3. Abstract
4. Introduction
5. Experimental
6. Results
7. Discussion
8. Acknowledgements
9. References

Writing and Plagiarism

Plagiarism is a direct violation of intellectual and academic honesty and is prohibited by University policy, which you should review on page 762 (Appendix D – Academic Honesty) of the current University Catalog. In short, plagiarism can range from intentionally mis-representing someone else's ideas as your own to extensively quoting someone else while giving them credit but using their ideas to make your point. Examples of plagiarism are summarized below:
a) failing to give credit by proper citations; b) failing to use quotation marks when quoting directly; c) Paraphrasing others' expressions; d) Assembling parts from various works as a single paper; e) Representing other's artistic/scholarly works as our won. Plagiarism by a student may constitute grounds for a failing grade, probation, suspension, or expulsion. Other resources to learn more about plagiarism can be found at:
http://www.calstatela.edu/library/research/IL10.htm
http://www.plagiarism.org/