

Chemistry 500, Spring 2009

Presentations in the Chemical and Biochemical Sciences

Meeting time: Wednesdays 1:30-3:30 pm at PS 624 or other designated room

Instructor: G. Santillan, PS 610; x2313; gsantil@calstatela.edu**Office Hours:** Mon-Wed 11 am-12 pm; Thu 1-2 pm; Fri 2-3 pm**Textbook:** "Teaching Matters" Pica, Barnes and Finger, Newbury House Publishers, 1990 - To be provided in class. Other books/readings may be provided over the quarter.

Course Objectives: By the end of this course, students will learn and improve their presentation skills in chemistry by objectively observing and evaluating their strengths and weaknesses through taped presentations. In so doing, students will overcome or diminish their fear of speaking before an audience.

In particular, students are expected to:

- (a) write regular self-evaluations reports.
- (b) take concrete steps to improve strengths and minimize weaknesses,
- (c) explain clearly chemical concepts in the undergraduate chemistry level.
- (d) organize ideas and plan time management
- (e) write 10-25 minute quizzes
- (f) use active learning methods
- (g) interact positively with challenging questions and settings,
- (h) actively interact as the audience and critique presentations
- (i) search for and critically evaluate an appropriate original research publication
- (j) present an original research paper in a seminar-style presentation
- (k) interact actively in the weekly department seminars

Grading is based on several factors: In addition to doing **5 presentations**, these are:

- a) Your **attendance** and **participation** in discussions. You are expected to attend all meetings and to ask questions and contribute answers during discussions.
- b) Your written **self-evaluations**. These are graded on objectivity. Students are required to review their presentation by watching the videotape of their own presentation. Self-evaluations are due on the week following one's presentation.
- c) **Evaluations** by the instructor. These carry the most weight among evaluators.
- d) Confidential **evaluations** by your peers during your presentations in the class. All other students are to evaluate and objectively criticize or commend student's styles, etc. Criteria will be supplied.
- e) Your consistent attendance and participation at the **Department Seminars**. (see below).
- f) **Your evaluations** of your peers. Your ability to critically, but fairly, evaluate your peers is also factored into the final grade. Being overly generous may adversely affect your own grade..
- g) A report based on your own **classroom observations** of two **faculty lecture** classes, during the quarter will also be required. This should be prearranged outside of class hours. Avoid attending the same classes as your classmates. Do not attend classes by your Ch 500 prof, your other current professors in other classes or those classes taught by your faculty research supervisor.
- h) Your final grade will also be greatly influenced by the **improvement** that is observed in your ability to clearly present well-organized material and to respond to questions is most important.

This will be particularly important for those who may start off with difficulties in doing presentations.

The **final exam** will be based mainly on **presentation #5** which should also include a written formal paper. Presentation #5 is at the level of a research topic which has not and will not be presented in the department seminars. It should be a new topic – i.e. not in the field of research of the student.

This class will be graded on the A-F scale, including +/-.

On Final Exam Week, a paper on Active Learning Techniques will be required.

For both the general and quantitative videotaped presentations, you must submit an outline of the lecture, a quiz that you would give pertaining to the presentation and a grading key that you would use to grade the quiz and assign partial credit. These written assignments will be graded. The paper will be due by June 3, 2008, Tuesday at 1:15 pm.

Tuesday Noon Departmental Seminars

As graduate students you are expected to attend all Tuesday seminars. Exposure to current topics of interest, to visiting chemistry and biochemistry faculty and to various presentation styles is of importance in your training as a professional.

Grading will be distributed as follows:

Class activity	Maximum Points	Brief Description of grading method
I. Presentations		
0 (in class reading)	20	Evaluation by: Prof, self & peer (film view: 10 pts, self eval: 10)
1 (Problem-solving)	55	Prof: 20, peer:10, film:10; self eval:10;HW:5
2 (Gen Chem theory)	65	Prof: 25, peer:20, film:10; self eval:10
3 (Lab methods)	70	Prof: 25, peer:20, film:5; self eval:15; quiz 5
4 (Gen Chem pre-lab lecture)	70	Prof: 25, peer:20, film: 5; self eval:15; quiz 5
5 (Formal Research Style)	140	Prof: 70, peer:50; final paper 20
II Other activities		
class observation Report	20	2 visits(8); 2 evaluations (12)
Department Seminar	25	Attendance and participation in Q&A (3 pts/seminar + additional for active participn)
Final paper on finals week Class participation	35	Paper + active participation in the class Q&A
Maximum Total Points	500	

Grades will be distributed according to the % of a student's points according to the following:

85% and above will be an "A"

75% and above will be a "B"

60% and above will be a "C"

50% and above will be a "D"

The projected **schedule** of activities for the class are:

Wk/da	Activity	Learning objective	Readings/handouts
1 April 1	Discuss syllabus, overview, videocam assignments	Orientation	Syllabus Pica, et al: ch 2, 3
2 April 8	Presentation 0: Recorded in-class readings. Assignments of presentations #1 and #2	Practice skills: volume, enunciation, eye contact, etc.	Ch. 2, 3, 5, 6/short topic evaluation forms, active learning techniques
3 April 15	Presentation 1: Basic Chemistry problem solving presentation; peer review and discussion.	Explain basic chemistry problem solving solutions	Ch 7, 8, 9/ short topic presentation 2 (instr:email:class obs)
4 April 22	Presentation 2: Gen Chemistry Theory presentation; peer review. Lab; assign classroom observation	Learn to explain abstract concepts; Use of <i>active learning</i>	Classroom observation forms.
5 April 29	Buddy system: pair-discussion of evaluation; active learning; ans'g questions; Classroom observations	Learn to improve from peer discussion. Classroom examples.	Short topics for presentation 3 (lab methods)
6 May 6	Presentation 3: Lab methods. Discuss presentations.	Learn to present lab methods/practical demo. Active learning. Q&A	Guidelines for presentation #5
7 May 13	Discussion: Active learning. Q&A; quiz-writing & grading. Students lead discussion	Learn to write quizzes; Self eval-improvements?	Ch 10; assign next topic on pre-lab presentations Approve presentn #5
8 May 20	Presentation 4: Prelab presentation (outline and quiz is due)	Evaluate quizzes and presentations; Q&A	Ch 4, 10; final presentation #5 and schedules
9 May 27	Presentation 5: Formal Research Style presentation	Seminar style presentation	Outlines for Final Presentation
10 June 3	Presentation 5: Formal Research Style presentation	Seminar style presentation	Outlines for Final Presentation
11 Jun 10	Submit Final Paper on active learning	Plan a presentation	Submit paper