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CHEM 485-486, Senior seminar, Fall 1999

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Chemistry 485-486
Senior seminar
1998-99
Monday, 4:15-5:15 p.m.
205 Kennedy Hall
Instructors: Robert Mortimer and Darlene Loprete

GENERAL:

The senior seminar is a culminating experience designed to assist you in integrating and applying your knowledge in science. The course is also designed to help you develop analytical and communication skills. It is a two-semester course, carrying two credits for the year, with a single grade given at the end of the second semester.

The course consists primarily of activities carried out by the students. In the first semester, you will lead a discussion of a scientific article as a member of a two-student team, and will give a brief oral presentation on a scientific topic. These presentations will be given at a Chemistry Department Symposium, tentatively scheduled for November 13. In the second semester, you will give a major oral presentation on a significant topic of current interest in chemistry or biochemistry and will submit a written report on the same topic. In addition, you will attend all regular chemistry department seminars.

GOALS:

The goals of this course are:

1. To give you practice in integrating and applying your scientific knowledge,
2. To give you practice in written and oral presentation,
3. To give you practice in analytical discussion.

POLICIES:

1. You must attend each class meeting and each department seminar. If you are unable to attend a class meeting or department seminar, you should notify Dr. Mortimer prior to the meeting.
2. You must observe all deadlines.

EVALUATION:

Your grade in this course will be determined by your participation in class discussions and your performance on your brief oral presentation, your major oral presentation, and your written report. All graded assignments will be given numerical grades. The following weights will be assigned:

Class discussion	15%
Brief oral presentation	15%
Major oral presentation	35%
Written report	35%

Your participation in class discussion will be evaluated subjectively by the instructors. The major portion of this evaluation will be on your leading of the discussion as a member of a two-person team, but you will also be evaluated on your general participation in all discussions. The written and oral presentations will be evaluated on your demonstrated understanding of the topic, organization, clarity, and professionalism of the presentation. Your oral presentations will

also be evaluated on your use of appropriate visual aids and your ability to answer questions about your topic. Your written report will be also evaluated on adherence to proper format, spelling and grammar. A written report that is deemed by the instructors as not meeting these standards at least at the C- level will be returned to you for correction.

DISCUSSION OF A SCIENTIFIC ARTICLE:

At the first meeting, teams of two students will be chosen. Each team will lead a class discussion of a scientific article to be chosen by the team. Articles in the following journals are recommended: *Science*, *Scientific American*, *American Scientist*, *Journal of Chemical Education*, and *Chemtech*. The team must choose an article and have it approved by the instructors on or before September 14. At least one week before the discussion, the team must provide at least one copy of the article to be placed in the Atkinson Chemistry Library for the other students to read. At the discussion meeting, the team of discussion leaders will provide an introduction to the topic (about 15 minutes) and then lead a discussion involving all members of the class, lasting approximately 20 to 30 minutes.

BRIEF ORAL PRESENTATION:

The second activity will be a brief oral presentation given by each student on a topic chosen by the student. The brief oral presentation should be about 20 minutes in length. You must select your topic and have it approved by the instructors on or before **October 26**. Your topic should be in area in which several chemical disciplines are applied. All of these presentations will be given at a Chemistry Department Symposium, tentatively scheduled for Friday afternoon, November 13. **One week** prior to the presentation, you should provide the instructors with an outline of the presentation, and should provide at least one copy of an article to be placed in the Chemistry Library for the other students to read. **On the Wednesday** preceding the presentation, you should provide Ms. Grant with the title and date of the presentation and your name so that she may post other announcements of your talk.

You should practice your presentation at least once, preferably before a practice audience. In the presentation, you must exhibit an understanding of the subject at an advanced undergraduate level, and must make the topic understandable to students and faculty in both chemistry and biochemistry.

MAJOR ORAL PRESENTATION:

During the second semester, you must give a major oral presentation of about 45 minutes in length on a significant biochemical or chemical topic of your choice. Your topic must be approved by the instructors at least **six weeks** prior to your presentation. **At least two weeks** prior to the presentation, you must meet with the instructors and submit an outline of your presentation. By that time you should have acquired all of the necessary sources and have a clear idea of the scope, organization and level of detail of the presentation as well as an understanding of the topic.

At least one week prior to your presentation, you should provide at least one copy of an article or book chapter that the other students can read to provide them with an introduction to your topic. **On the Monday** preceding the presentation, you must post an abstract of the talk on the door to the Atkinson Chemistry Library. The abstract should provide a brief overview of the presentation. You must also provide Ms. Grant with the title and date of the presentation and your name so that she can post other announcements of your talk.

The presentation should be well organized and should be delivered in a professional manner. It should include adequate visual aids. You should practice your presentation several times, with a practice audience present for at least one practice.

In the presentation, you must exhibit an understanding of the subject at an advanced undergraduate level, and must make the topic understandable to students and faculty in both chemistry and biochemistry. You should be able to answer reasonable questions about your topic.

WRITTEN REPORT:

The written report will be a written version of your major oral presentation and must be submitted to the instructors **no later than two weeks** after your major oral presentation. The report must be written at a level appropriate for college seniors. It should be long enough to develop the significant scientific results and/or theory. A length of 15 to 20 pages is generally sufficient to accomplish this task.

You must use standard grammar and spelling. The style of the report should be the same as that used in the *Journal of the American Chemical Society*. The details of this style are described in the January 11, 1995, issue of that journal, beginning on page 9A. Pay particular attention to the citations, figure captions, and table titles. The report must be typed and double spaced.

TENTATIVE SCHEDULE:

FALL SEMESTER

August 31	Introductory meeting
September 7	Labor Day recess
September 14	deadline for discussion topics
September 21	outside speaker
September 28	student led discussion
October 5	student led discussion
October 12	student led discussion
October 19	Fall break
October 26	Outside speaker, deadline for brief oral presentation topics
October 30	deadline for outline of brief oral presentation
November 2	no meeting
November 6	deadline for placing articles in the
Chemistry	
	Library
November 9	no meeting
November 13	Chemistry Department Symposium - brief oral presentations

SPRING SEMESTER

January 25	introductory meeting
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February 1	outside speaker
February 22	open
March 1	major oral presentation 1
March 8	Spring recess
March 15	major oral presentation 2
March 22	major oral presentation 3
March 29	major oral presentation 4
April 5	major oral presentation 5
April 12	major oral presentation 6