

Chemistry 385-386: Chemistry Junior Seminar,

2002-2003: Monday, 4:10-5:10 p.m.

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DESCRIPTION: This course is a two-semester course carrying one credit for the entire year and with a single grade for the entire year. In this seminar course, you will focus on three skills that are essential for scientists: information retrieval, reading and understanding articles from the chemical literature, and preparing and making effective oral presentations.

GOALS: To be successful in this course, the goals that you should work towards are:

1. to develop a basic knowledge of the various chemical journals and reference sources available and to become proficient in carrying out literature searches
2. to become engaged in reading articles from the chemical literature and to understand, and be able to discuss, salient features from these articles
3. to develop the ability to research, organize and make an effective oral presentation

EVALUATION: Your grade in this course will be derived from three components: your attendance and participation in the seminar sessions, a literature search assignment, and a brief oral presentation. These three items are each worth 100 points, and your grade in the course will be assigned according to the following scale:

<u>Grade</u>	<u>Total points</u>
A	270-300
B	240-269
C	210-239
D	165-209
F	below 165

Plus and minus assignments will be made approximately within these ranges.

POLICIES: Your attendance at every meeting of seminar (both semesters including departmental seminars and senior seminar sessions indicated) is expected. In instances in which an absence is unavoidable, please contact me promptly. If you are unable to attend a class, all material discussed and assignments given are your responsibility. For each class missed, I will deduct 5 points from your attendance/participation grade (up to 100 points).

You will be given a graded literature search assignment that is due **October 7**. Unless there are extenuating circumstances (e.g., medical emergencies, a death in your family or required travel for a Rhodes' event), if this assignment is turned in after this time but before October 23, 10 points will be deducted from the grade on that assignment. After October 23, I will not accept the assignment and zero points will be recorded for the assignment.

There will be assigned readings and other non-graded homework and I expect that you will complete these assignments in a timely manner.

SEARCHING THE CHEMICAL LITERATURE

The principal tool for literature searching that you will use is STN, an internet-based service that electronically searches a number of databases, including *Chemical Abstracts*, starting in about 1967. You will be shown how to locate and retrieve information from this electronic database as well as from the print version of *Chemical Abstracts*. You will carry out several individual searches, looking for specific articles and patents. You will be asked to complete a homework assignment (not graded) and then be given another assignment that will be due **October 7** and be graded.

READING THE CHEMICAL LITERATURE

After you have mastered searching the chemical literature, I will ask you to read an article (of my choosing) that we will discuss in class. The purpose of this is to introduce you to a critical reading of the scientific literature. After this class, we will join the senior seminar chemistry class in their discussion of articles from the scientific literature. The members of the senior seminar class are responsible for selection of the article and leading the discussion. My expectation is that you will read the article being discussed and engage in the subsequent discussion.

BRIEF ORAL PRESENTATION

Near the end of the first semester, you will give a 15-minute oral presentation on a scientific topic of your choosing. You must select your topic and have it approved by me by **October 28**. In the presentation, you must exhibit an understanding of the subject and must make the topic understandable to your fellow students. You should practice your presentation at least once, preferably before an audience of one or more persons.

Your oral presentation will be evaluated on the scientific content, organization of the topic, clarity of presentation, and your apparent knowledge of the topic. The weight of each of these in determining your final grade on this assignment is;

Content of presentation (accuracy, completeness, appropriate level): 30%

Organization of topic: 20%

Presentation (visual aids): 15%

Presentation (verbal): 15%

Command of subject (presentation and answers to questions): 20%

TENTATIVE SCHEDULE:

FALL SEMESTER

September 9	Introductory meeting: Overview of the chemical literature
September 16	Searching the chemical literature (hardcopy and online databases)
September 23	Reading the literature/literature search homework due
September 30	Reading the literature
October 7	Senior seminar student led discussion: Literature search assignment due
October 14	Senior seminar student led discussion
October 21	Fall break
October 28	Merck-AAAS Seminar: Dr. Lora V. Hooper, “How normal resident bacteria shape our biology: <i>in vivo veritas</i> ” Deadline for brief oral presentation topic approval
November 4	Oral presentations
November 11	Brief oral presentations
November 18	Brief oral presentations
November 25	Brief oral presentations
December 2	Brief oral presentations
December 9	Merck-AAAS Seminar: Dr. Charles L. McCormick, “Precisely Tailored Water-Soluble Block-Copolymers for Pharmaceutical and Environmental Applications”

SPRING SEMESTER

January 27	Open
February 3	Open
February 10	Open
February 17	Open
February 24	Open
March 3	Open
March 10	Spring recess
March 17	Open
March 24	Open
March 31	Open
April 7	Open
April 14	Open
April 21	Open
April 28	Open
April 21	Open