

CHEMISTRY 403 - SENIOR SEMINAR I
COURSE SYLLABUS
FALL 2008

INSTRUCTOR:

Dr. Mark Jensen
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OFFICE HOURS:

Mon. 8:45-9:45
Tues. 8:45-9:45
Wed. 8:45-9:45
(or whenever I'm around)

COURSE MEETING TIME: Fridays, 2:40-3:50, Block 1, Ivers 386.

COURSE WEB PAGE: <http://www4.cord.edu/chemistry/jensen/chem403/> - This page is directly accessible from my homepage. A course schedule, syllabus, and other information relevant to the course will be posted here. Please check back periodically for updates.

COURSE DESCRIPTION: This course is the first in a two-course sequence (Chem 403/404) dealing with the preparation and presentation of a major paper in the field of chemistry. The focus of Chem 403 will be on the fundamentals of researching the paper, writing the paper, and giving the presentation. The final draft of the paper and the actual presentation will be the requirements of the next course, Chem 404.

COURSE SCHEDULE: In each class period one or more members of the chemistry faculty will cover a topic related to researching, writing, or presenting the paper. The tentative schedule is as follows:

| | | |
|-----------|----|---|
| August | 29 | Introduction to the Course, Choosing a Topic (M. Jensen) |
| September | 5 | Concordia Library Resources (M. Jensen) |
| | 12 | Writing the Paper I (C. Krogstad, E. Peterson) |
| | 19 | Seminar – Prof. Gordie Miller, Iowa State University |
| | 26 | NO CLASS – Help with Science Academy!! |
| October | 3 | Writing the Paper II (C. Krogstad, E. Peterson) |
| | 10 | Preparing and Giving the Presentation; Assignment of spring seminar dates (J. Mach, G. Wyllie, D. Mork) |

GRADING: The course grade will be based on a 100-point maximum.

- Attendance is a strict requirement for this class and only documented excuses for absence will be accepted without penalty. Each undocumented absence will result in a 10-point reduction in the final course grade.
- Assignment deadlines are listed below. Each missed deadline will result in a 5-point per day reduction in the final course grade. Points will also be deducted for unsatisfactory completion of assignments.

Final grades will be assigned according to the following guidelines:

A-: 90 B-: 80 C-: 70 D-: 60

ASSIGNMENT DEADLINES: There are a number of important assignment deadlines associated with the course. Each completed assignment must be signed by your advisor and turned in to me by the given deadline. These deadlines are as follows:

| | |
|---|-------------------|
| Choose advisor and submit advisor form | Sept. 5 (Friday) |
| Complete project summary, signed by advisor (see below) | Sept. 26 (Friday) |
| First draft of abstract, signed by advisor (see below) | Oct. 3 (Friday) |
| Second draft of abstract, signed by advisor | Oct. 10 (Friday) |

As stated above, a missed deadline will result in a 5-point per day reduction in your course grade.

SEMINAR ADVISORS: In this course each student will choose one member of the chemistry faculty to act as his or her seminar advisor. (Possible advisors are Haiyan Fan, Mark Jensen, Chopper Krogstad, Julie Mach, David Mork, Pam Mork, Eric Peterson, Drew Rutherford, Darin Ulness, and Graeme Wyllie.) This advisor will work with the

student throughout both courses in choosing a proper topic, writing the paper, and preparing the presentation. No faculty member will be expected to advise more than *two* students.

PROJECT SUMMARY: Your project summary should serve as the beginning of an outline for your paper. Here you will address the topic of your paper, the relevance of the topic, the main points, and the connections between these points. The project summary should specifically address each of the following:

1. The topic of your paper
2. The importance of this topic to the scientific community and beyond
3. The research articles your paper will be based upon (at least 3)
4. A summary of each of these articles and how they connect to your topic

You will work with your advisor to complete your summary. Have your advisor sign the final draft, and submit it to me by Sept. 26.

ABSTRACT: Once your project summary has been completed, your next assignment is to write a draft of the abstract to your paper. The abstract should be a short summary of the paper, emphasizing the main points and minimizing the details of the work. You'll work with your advisor in completing this, and you'll present the first draft to the class on Oct.3. Abstracts should be 250-400 words in length.

DEADLINES FOR CHEM 404: Although Chem 404 is listed as a spring semester course, the 403/404 sequence should be thought of as extending throughout Blocks 1, 2, 3, and 4. To emphasize that work on a paper of this magnitude must continue throughout the entire fall semester, the deadline for the first completed draft of the entire paper is **Friday, January 9**, and the seminars will formally begin the following week on January 16. A complete list of deadlines for Chem 404 will be provided early in the fall semester, and students are encouraged to begin meeting these deadlines in Block 2.

DEPARTMENT GOALS: The Chemistry Department faculty has agreed upon the following list of goals that graduating seniors are to develop by the time they complete the chemistry major. Goals emphasized in this course are shown in *italics*.

A chemistry major should:

1. Have a firm understanding of the core principles of chemistry as they apply to each of the major subdivisions of the discipline.
2. *Be able to effectively communicate their knowledge of the field, both through writing and speaking.*
3. *Be comfortable and competent in the use of modern technology for the acquisition, analysis, and presentation of chemical data and information.*
4. Possess good problem-solving skills, and be able to apply these skills both independently and collaboratively.
5. Be able to gather experimental data safely and accurately using a wide variety of laboratory instruments and methods.
6. *Be able to apply their knowledge of chemistry to the explanation and interpretation of new or unfamiliar chemical information.*
7. *Be able to select, interpret, and utilize relevant scientific literature from a variety of sources including libraries, electronic databases, and the Internet.*
8. *Understand and honor the ethical issues related to the use and misuse of chemical information and materials.*
9. Be able to apply their knowledge and skills to professional experiences such as teaching, conducting research, and participating in internships.
10. Gain an understanding of the relationship of chemistry to other sciences and to the needs of society as a whole.