

Chemistry 4990 – Senior Seminar, Fall 2007

Instructor: Dr. Bradley S. Davidson
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Meeting Time/Place: F 2:30 – 4:20 pm, Widtsoe 007

Office Hours: By appointment

Course Description: This course is designed for senior undergraduate students seeking a B.S. degree in chemistry. The goals of the course are to provide training in 1) literature searching, 2) analysis of primary chemical literature, 3) critical analysis of oral presentations, 4) technical writing, 5) resume preparation, and 6) the presentation of chemical information through seminars and poster presentations.

Course Outline and Exam Schedule:

Week	Date	Activity
one	8/31	Introductory meeting
two	9/5	Paulo Cesar Piquini Seminar
	9/7	Piquini seminar discussion; Seminar / poster intro
three	9/14	Library Resources (Flora Shrode, Merrill-Cazier Library 122); Literature search homework passed out; Seminar/Poster topic due
four	9/21	Resumes and Graduate school applications (Donna Crow, USU Career Services); Seminar abstract due
five	9/26	Jason Shearer Seminar
	9/28	Shearer seminar discussion; Literature search homework due
six	10/5	Resume due
seven	10/12	No Class – Seminar preparation
eight	10/19	Fall Break – No Class
nine	10/26	Seminar practice
ten	11/2	Seminar practice
eleven	11/9	Seminar presentations
twelve	11/16	Seminar presentations
thirteen	11/23	Thanksgiving Break – No class
fourteen	11/28	Norman Dovichi – Olsen Seminar
	11/30	Poster presentation
fifteen	12/7	Dovichi seminar critique due; Assessment Exam

Text: There is no assigned text; however students are urged to purchase a copy of the books *Elements of Style*, Strunk and White, 4th edition, and *The ACS Style Guide: A Manual for Authors and Editors*, Dodd editor. Both are excellent books to have on your bookshelf.

Grading: Grades will be based on points awarded for the elements described below. Final grades will be assigned based upon a percentage of the total points in the following manner: A's 100-90%, B's 90-80%, C's 80-70%, D's 70-60%, F below 60%. Assignments turned in after the deadline will have 2 points deducted for each day that it is late.

Point Distribution

Attendance	15
Resume	20
Seminar Discussions (2x10)	20
Dovichi Seminar critique	10
Additional seminar critiques (2x5)	10
Literature search homework	40
Seminar practice	15
Seminar	50
Poster	50
Assessment Exam	20
Total	250

Attendance: Attendance is required for all scheduled activities, including the seminar practice and formal seminar presentations of your classmates. In addition, two science-related seminars of the student's choice, presented by faculty, postdocs, or graduates students, must be attended, and written critiques prepared. A missed activity can be made up at the discretion of the Professor. The Professor, in consultation with the student, will devise make-up assignments. For each unexcused absence, 5 points will be lost. More than three unexcused absences will result in a failing grade.

Resume: Following the guidelines presented by Donna Crow, Director of Career Services, the student will prepare a 1-2 page resume.

Seminar Discussions: After the Piquini and Shearer seminars, the class will discuss, analyze, and critique issues of science and presentation. Participation is important. Each student will be required to provide at least two comments.

Dovichi Seminar Critique: Norman Dovichi, Endowed Professor of Analytical Chemistry, University of Washington will be presenting the second annual Richard Olsen Lecture. The required two-page critique should include a discussion/description of the chemistry presented and an analysis of the presentation, considering the issues brought up during earlier seminar discussions.

Additional Seminar Critiques: For the two additional seminars (see Attendance for description), a shorter one-page version of the above-described critique is required. These critiques will be due the last day of class.

Literature Search Homework: After choosing a seminar/poster topic, you will be asked to perform a complete literature search, using the techniques described to you during the week 3 visit to the library. This homework will be administered and evaluated in collaboration with Reference Librarians Britt Fagerheim and Flora Shrode.

Seminar: Each student will present a seminar during one of the divisional seminar series, i.e., organic/inorganic, or analytical/physical. The topic of the seminar can be either a literature topic of the student's choice or the student's undergraduate research results and should be 15 minutes long and be presented using PowerPoint slides. Each student will be assigned a faculty mentor to help him or her formulate and prepare his or her seminar. The topic should be discussed with the Professor Davidson by 9/14 and an abstract is due 9/21 in class. The two weeks prior to the formal seminar presentations will be reserved for seminar practice. The grade will be divided between the abstract, the quality of the slides, the oral presentation, and the student's ability to answer questions.

Poster: Because posters are the most common form of presentation at many scientific meetings, each student will also present their seminar topic as a poster. The poster will be presented on a 3 ft x 6 ft board and should follow the guidelines passed out in class. The grade will cover clearness and organization of the poster and the student's ability to discuss the contents with students and faculty.

Assessment: Students will be administered an exam at the end of the semester meant to aid in the assessment of the chemistry program. It will be divided into six sections involving analytical chemistry, biochemistry, general chemistry, inorganic chemistry, organic chemistry, and physical chemistry, each with roughly 20 min of multiple-choice questions. Each student that scores above 50% will receive 20 pt. In addition, faculty members on the Assessment and Curriculum Committee will interview students during the poster presentations to help assess their strengths and weaknesses, in addition to questioning students about their impressions of the chemistry program at USU. Finally, students will have the opportunity to give input about the course on the normal course evaluation forms.

Provisions: This course will adhere to the USU Academic Policies and Procedures Manual found at the web site <http://www.usu.edu/policies/>. Any student with a disability who requires accommodation must contact the instructor. The disability must be documented by the Disability Resource Center. Course materials may be requested in alternative formats.