

Chemistry 4990 Senior Seminar (2 Credit)

Instructor: Bob Brown
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Meeting Time/Place: F 2:30 – 4:20 PM, Widtsoe Hall room 007
Office Hours: MWF 1:30-2:30 PM or by Appointment

Course Objective

This course is designed for senior undergraduate chemistry majors. The goals of the course are to provide training in: 1) library and electronic based scientific literature searches with emphasis on the chemical literature, 2) resume preparation, 3) technical writing, 4) critical analysis of oral scientific presentations and 5) the presentation of chemical information via seminar and poster presentations.

Weekly Course Schedule (tentative)

Week	Date	Scheduled Activity
one	1/11	Introductory meeting
two	1/16	Prof. Lia-Xi Wang (Univ. of Maryland) Seminar
	1/18	Wang Seminar Discussion; Seminar/Poster Intro
three	1/25	Resume/Career Services – Donna Crow (scheduled individually by appointment)
four	2/1	Library Resources (Flora Shrode, Merrill-Cazier Library) (tentative schedule)
five	2/8	Attend Divisional Seminar of Student's Choice
six	2/15	Attend Divisional Seminar of Student's Choice
seven	2/20	Prof. Sean Elliott (Boston University) Seminar
	2/22	Elliott Seminar Discussion/Literature Search Homework Due
eight	2/29	No Class – Initial Seminar & Poster Preparation Time
nine	3/7	No Class – Seminar Preparation Time/Preliminary Abstract Due
ten	3/14	Spring Break Week – No Classes
eleven	3/21	Seminar Practice/All Abstracts Due
twelve	3/26	Prof. Craig Ogle (University of North Carolina) Seminar
	3/28	Ogle Seminar Discussion/Seminar Practice
thirteen	4/4	Seminar Presentations
fourteen	4/11	Seminar Presentations/All Seminar Critiques Due
fifteen	4/18	Poster Preparation/Poster Review & Assistance as needed
sixteen	4/25	Poster Presentation (joint with biochemistry)

Textbook

There is no required text for the class. Occasional handouts will be provided during the semester as needed.

Grading

Grades will be based upon points earned for the various categories described below. A point penalty will be assessed for late assignment (to be determined by the instructor, but it will not be less than 1 point for each day the assignment is late). Final letter grades will be assigned based upon the following percentages of total possible points: A 90-100%, B's 80-89%, C's 70-79 %, D's 60-69%, F <60%. A +/- designator for the letter grade will be assigned as appropriate.

Point Distribution

Attendance	30
Resume Preparation	20
Seminar Discussions (3 x 10)	30
Seminar Critique's (3 x 10)	30
Literature Search Homework	30
Seminar Practice	10
Seminar	60
Poster	60
<u>Assessment Exam</u>	<u>30</u>
Total Points	300

Note: Grade cutoffs may change to lower percentages (but not higher), solely at the Instructor's discretion.

Course Requirements

Each student will be expected to complete the following in order to satisfy the course requirements:

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 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. Given the small number of students in Chem 4990, students will make individual appointments with Career Services as their schedule permits.

Seminar Discussions: After the Wang, Elliott and Ogle 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 related to each seminar.

Seminar Critiques: A one-page written critique for three seminars attended by the student during the semester are required (10 points each). These should include a

discussion/description of the chemistry presented in the seminar and an analysis of the presentation. Students should include in their critique the issues brought up during earlier seminar discussions. These written critiques are due in class on April 11.

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 4 visit to the library. This homework will be administered and evaluated in collaboration with Reference Librarian Flora Shrode.

Student Seminars: 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. It should be 15 minutes long and be presented using PowerPoint slides. The instructor will help the student formulate and prepare his or her seminar. The topic should be discussed and approved by Professor Brown prior to the week 4 Library Resource exercise. A preliminary abstract is due 3/7 in class and the final abstract is due 3/21. The two weeks prior to the formal seminar presentations will be reserved for in-class 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.

Student Posters: Because posters are a very 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 that will be 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.

Poster/Seminar Presentation Topic Selection

The topic of your presentation must be related to some area of chemistry or biochemistry. I must also approve your presentation's topic. You should choose a topic that interests you and lends itself to the available 15 minute time limit (not including questions). A 15 minute presentation (plus 5 minutes for questions) is common for most scientific meetings. If you are doing undergraduate research within the department, a presentation based upon your research is encouraged. We will discuss suitable topic selection during the semester. You will be required to submit an abstract (200 words or less) for your presentation that will be distributed to students and faculty prior to the seminar. The abstract should be a concise (and informative) summary of your presentation and include a list of background references consulted in preparing your presentation (not to be included in the 200 word count).

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 65% will receive 30 points, students scoring above 50% will receive 20 points. 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.

Electronic Mail Address

As we will not meet every week during the semester, please supply me with your email address to facilitate communication during the semester and schedule necessary meetings. You may do this by sending me an email message at: brownusu@cc.usu.edu.

Final Note:

In coordination with the Disability Resource Center, reasonable accommodations will be provided for qualified students with disabilities. Please meet with the instructor during the first week of class to make arrangements. Accommodations and alternative format print materials (large print, diskette or Braille) are available through the Disability Resource Center, which is located in the basement of the University Inn (phone number 797-2444).