

Biochemistry Seminar I, CHEM 4890, Fall 2006, 1 Credit

Index 49198 Section 1, F, 3:30-5:00 PM, Widtsoe 333 Prof. Lance C. Seefeldt, W241, 797-3964, seefeldt@cc.usu.edu

Office Hours: By appointment (W241)

Course Goals: This course is designed for senior undergraduate students who are pursuing a BS degree in biochemistry. The goals of this course are to provide training in: 1) literature searching, 2) analysis of primary biochemistry literature, 3) technical writing, 4) group presentations on literature, 5) resume preparation, and 6) interviewing skills. This will be accomplished through a combination of lectures, workshops, reading, interviews, group discussions, and writing assignments. The overall objective of the course is to provide training in areas critical to success in a job or academic pursuit that may not be covered in traditional courses. These topics are essential to success in a biochemistry related job, graduate work, or professional school.

Texts: There is no assigned text for the course. Students are urged to purchase a copy of the book *Elements of Style*, Strunk and White, 4th edition and *The ACS Style Guide: A Manual for Authors and Editors*, Dodd editor. Both are essential books to have on your bookshelf. Additional sections from books, reviews, and primary literature will be handed out as needed.

WebCT: Information essential to the course will be available through the course WebCT page. This site is found at webct.usu.edu. WebCT username = banner ID; WebCT password = banner pin. Only students who are registered for the class will have access to the course WebCT pages.

Grading: This course will be graded based on the points received for the elements presented below (table). Final letter grades will be assigned based on the percentage of the total points possible with the following scale: A's 100%-90%, B's 90%-80%, C's 80%-70%, D's 70%-60%, F below 60%. Attendance at all of the assigned meetings is essential. A missed event can be made up at the discretion of the Professor. Activities required to make-up missed events will be decided by the Professor in consultation with the student. Missing more than two of the events will result in zero points for all missed events with no option for make-up. Assignments turned in after the deadline will have 2 points deducted for the first day that it is late, with 2 points deducted each additional day that it is late.

Graded Elements: Following are the graded elements (with maximum possible points).

<p>Chemistry 4890 Fall 2006 Points Element Description</p> <p>Attendance Attend all assigned class sessions Pei Seminar Discussion Participate in discussion ahead of the Pei seminar Dalby Seminar Discussion Participate in discussion ahead of the Dalby seminar Literature Search Results Email literature search results Literature Report Submit a review of a primary literature citation found in the literature search Literature Discussion Informal presentation review of primary literature identified Resume Complete your own resume Interview Complete interview Seminar Critique Complete seminar critique for Boger seminar Structure Report Complete report for a protein structure Total</p>

Max. Points
Required 10
10 10 10 20
10 10 10 10
100

Assessment: Assessment of the course will include a Course Evaluation (the blue forms administered by USU) at the end of the course and a mid-term Survey (administered by the Professor) seeking input on course direction and suggestions for improvement. Information from the Course Evaluation and Survey will be used to improve the course this year and in subsequent years.

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.

Chemistry 4890 Fall 2006 Calendar				
Date	Day	Time	Location	Assignment
9/1	F	3:30 PM	W333	Organizational meeting/syllabus
9/8	F	3:30 PM	ESLC 046	Discussion of papers assigned for Pei seminar
9/13	W	4:00 PM	ESLC 046	Attend seminar by Pei
9/22	F	3:30 PM	Lib 122	Meet with Flora Schrode in library for literature searching
9/29	F	3:30 PM	ESLC 046	Discussion of papers assigned for Dalby seminar
10/2	M	5:00 PM		Results of literature search due
10/4	W	4:00 PM	ESLC 046	Attend seminar by Dalby
10/13	F	5:00 PM		One page literature report and paper due
10/18	W	4:00 PM	ESLC 046	Attend seminar by Boger
10/27	F	3:30 PM	W333	Donna Crow – career services resume and interviews
10/27	F	5:00 PM		Email critique of Boger seminar due
11/3	F	3:30 PM	W333	Literature presentations 1
11/10	F	3:30 PM	W333	Literature presentations 2
11/10	F	5:00 PM		Email or hard copy of resume due
11/17	F	3:30 PM	W333	PDB and Pymol presentations/workshop
11/27	M			Interviews week
12/4	M			Interviews week
12/8	F	5:00 PM		PDB structure report due

Assignment Specifics: Attendance

Role will be taken and attendance at all of the assigned events is expected as outlined above.

Discussion of Papers and Seminars

We will meet jointly with Chemistry 7800 students (9/8 and 9/29) to discuss papers assigned the previous week from the laboratory of the seminar speaker coming on the following Wednesday. You should read the papers that are assigned and be prepared to discuss or ask questions related to these papers at our meeting. Grading will be dependent on participation (no participation will earn no points). You will also attend the seminars on the following Wednesday (9/13 and 10/4). You will also attend the seminar by Dr. Boger (10/18). You should prepare a critique of the seminar on a form that will be provided and turn in this critique before 10/27 at 5 PM. Grading of the critique will depend on the quality of your analysis.

Literature Searching and Databases

We will meet in library room 122 (right behind the circulation desk) on 9/22 at 3:30 PM. Flora Schrode of the library will conduct a session on database searching and electronic journals. Following the class, you should conduct a literature search using the three main databases (PubMed, SciFinder, Web of Science) on a biochemistry topic of interest to you. Prepare a one page report on the results of your database searches. This is due to me by 10/2 at 5 PM (you can send it by email). Include details of how you conducted the searches, what your final results were, and a comparison between the searches. Grading will be dependent on selection of topic, correctly using the searches, and your presentation of your approach. From your searches, you should identify a single new paper in a top biochemistry journal (*Biochemistry*, *J. Biol. Chem.*, *Biochem. J.*, *Proc. Nat. Acad. Sci.*) that you will read in detail. You will prepare a one page report on this paper, with an overview of the research problem, and the main conclusions. Include a copy of the paper. This report is due to me by 5 PM on 10/13. The report will be graded on written English and content and appropriateness of your selection. Finally, you will conduct a short (10 min) review of the paper in a group meeting-style session to be held on 11/3 and 11/10 (you will be assigned to one of these two dates). You do not need to prepare any visual aids, but you should be prepared to hold up the paper to the rest of the class and to explain the purpose, some of the key figures/tables and what they showed, and the conclusions. Grading will be based on the quality of your presentation and participation in discussion when others present.

Resume and Interviews

We will meet with Donna Crow from USU Career Services on 10/27 in W333 at 3:30 PM. She will provide information on the preparation of a CV/resume and on interview skills. You will prepare your own CV/resume, which is due to me on 11/10 by 5 PM. Grading will be based on the quality of your resume. Finally, you will conduct a mock interview during the week of 11/27 or 12/4. You will be assigned an interview time and the interviewer will have a copy of your resume. The interviewer will fill in an interview critique form that will be returned to you as feedback. Grading will be based on the quality of your interview.

Biochemistry Databases

We will have a session on how to access databases (PDB, NCBI) important to biochemistry research on 11/17. This will include accessing the protein data bank (PDB) and training on the use of structure visualization software (e.g., Pymol). You will prepare a report on a structure that is downloaded and presented with Pymol that is due on 12/8 by 5 PM. Grading will be based on the quality of your report.