

## Biology 495 – Senior Seminar Spring 2011

12:20 – 1:15 pm

Shiley Center for Science & Technology  
Room 325 for pre-seminar meetings / Room 232 for Senior Seminars

Dr. Valerie Hohman  
Office: SCST 436  
Lab: SCST 475

Phone: x7440  
e-mail: [vhohman@sandiego.edu](mailto:vhohman@sandiego.edu)

Office hours: Mon. 1:30 – 4:15 pm, Tues. 2 – 4 pm, Wed. 11:15 am – 12 pm.

Also by appointment. Senior seminar students are strongly encouraged to make appointments outside of these times for *seminar practices* (2-week and 1-week deadlines).

### Course Objectives:

#### By the end of the semester, each student should:

- Have an in depth understanding of a topic in Biology of the student's choosing.
- Understand the steps of the scientific process, including literature searching and analysis, the formation of tractable and interesting research questions and testable hypotheses, synthesizing data and/or information from the literature to address hypothesis, and drawing sensible and applicable conclusions.
- Be effective at communicating science to an audience of peers, faculty and general public.
- Be able to think critically and constructively about scientific talks and papers.

### Course Requirements:

#### Attendance

Attendance at all class meetings and at scheduled departmental seminars is required.

#### Participation

*Evaluate the presentations of your classmates.* Evaluation forms will be provided on Dr. Loer's Senior Seminar Course Webpage (<http://home.sandiego.edu/~cloer/bio495.html>). They are to be completed, saved as a PDF, and then submitted via the online submission link by 11:59 pm of the day following the seminar (Tues or Saturday). The online submission link is also on Dr. Loer's Senior Seminar Course Webpage. Each evaluation will include a section for you to write a brief summary of the presented topic (about 250 words) as well as a section for you to critique the effectiveness and quality of the seminar. Your critique should contain meaningful comments and suggestions for the presenter, who will receive them at a meeting with the instructor approximately a week following the seminar. The evaluations will be anonymous to everyone but the instructor, and I will evaluate the quality of your critiques and seminar summaries.

*Ask questions at the end of the seminars.* You do not have to ask a question at the end of every seminar, but by the end of the course you should have asked a couple of meaningful questions.

Students are not to engage in other activities during seminars, including any use of electronic devices such as cell phones or laptops. Such behavior is rude and inappropriate, and if observed will count against your participation grade.

## **Seminar**

Each student is required to present a 25 minute seminar on an appropriate biological topic of his or her choice (Your presentation should last 20 minutes, leaving five minutes for questions.). There are two categories of topics: (1) a presentation of a student's own research or (2) a current review of primary literature on a specific research topic. The presentation must come from a research-perspective, and the instructor must approve your topic. Medical topics *may* be acceptable if approached from a research perspective and not a clinical perspective. Seminar dates will be scheduled during the first and second week of classes. Once a date is set, it cannot be changed except for a medical emergency. If you are not prepared to present on your scheduled date, rescheduling will result in the penalty of one letter grade.

## **Deadlines**

Missing any of these deadlines will count against your grade!

*Three weeks prior to your seminar*, you must meet with me to discuss your choice of topic and to present an outline of your talk and a list of references. The outline should include drafts of figures and/or tables that might be used as slides as well as what you intend to include in the introductory and summary slides. *I strongly encourage you to talk to me about your topic before this time so that if you need to modify your topic you have time to do so.*

*Two weeks prior to your seminar*, you must have digital drafts of all of your slides, and you should know what information you want to convey with each slide. We will do a "dry run" of your presentation at this time. Plan for this meeting to take one hour.

*One week prior to your seminar*, you must have completed at least one more rehearsal of your talk with me. All slides should be made and the text of the seminar should be finished. This time should be used to make minor adjustments and fine tune your presentation. You also must submit to the department's executive assistant (Shawna Fehrman) a flier advertising your talk. The flier must include the title of your seminar, your name, and the time and place of your seminar.

*About one week after your seminar*, you need to meet with me to review your evaluations and discuss your seminar.

## **Mini-Presentation**

Each student will give a 5-minute presentation of one paper from the primary scientific literature to the class. You should present the objective(s) of the paper, the pertinent experimental methods used, the results, and the author's conclusions. The paper may be on any non-clinical research topic in biology and does not need to be related to your main seminar topic. Your presentation will not be graded; however, if you do not present a paper, it will count against your attendance/participation score.

## **Tentative Senior Seminar Schedule**

Jan. 24	Course meeting and overview with all instructors, assignment to instructor
Jan. 28 & 31	Seminar Prep: Topic Selection, Seminar Do's & Don'ts
Feb. 4	Mini-presentations
Feb. 28 – May 2	<b>Senior Seminars</b>
[Mar. 14 – 18]	SPRING BREAK – NO SEMINARS
[Apr. 22 – 25]	EASTER BREAK – NO SEMINARS
TBA	Biology Assessment Test

## Grading

Your grade in the course will break down as follows:

Attendance/participation	20%
Meeting deadlines	20%
Seminar	60%

Grading of your seminar is based on your understanding of your topic, your preparation for the seminar, and your final presentation:

Level	Understanding / Content	Preparation	Presentation
<i>Excellent</i> (A)	Can clearly and succinctly explain content and demonstrate understanding by relating ideas to those from outside the papers and making insightful comments. Understands what background material is relevant to presentation. Research content of the seminar is a synthesis of multiple related articles from the primary literature and not based on 1 or 2 papers only.	<b>First meeting:</b> clear outline of presentation, topic is well defined, most papers/ experiments to present are chosen. <b>Second meeting:</b> slides are in near final form, organization is logical. Practice talk is rehearsed and flowing. Suggestions for improvement are used effectively. <b>Final meeting:</b> Oral presentation is strong, requiring only minor improvements (polishing) to be excellent. Flyer is posted one week ahead.	Well organized with logical flow. Structure is apparent but not overbearing. Few if any errors. Topic is made interesting to the audience. Good delivery with little or no reference to notes. Answers questions well and demonstrates a clear mastery of material.
<i>Good</i> (B)	Accurate, but without insight. Demonstrates an understanding of material presented but lacks a synthesis of multiple clearly related literature sources. Requires major assistance in organization and/ or interpretation of data presented.	<b>First meeting:</b> general plan for talk, some papers not selected or topic incomplete. <b>Second meeting:</b> slides require significant editing, rearranging, additions. Practice talk may be halting and incomplete. <b>Final meeting:</b> oral presentation is in near final form, but some revisions are still required	Overall, a clear and logical presentation, but with some weaknesses. Some reading of slides, reference to notes, volume problems, "ums," etc... Talk is mostly engaging. Serviceable answers to questions, but lacking in depth.
<i>Adequate</i> (C) or <i>not</i> (D-F)	Some minimal understanding, but significant deficits remain in understanding of material. Little data presented, mainly or entirely from a single paper.	Some deadlines missed; student has to be reminded of deadlines. Difficulty in selecting and defining an acceptable topic. Some key suggestions for improvement are ignored. Talk and slides require significant revisions during the last week.	Organization haphazard, logic is difficult to follow. Frequent referral to notes. Cannot effectively answer most questions. Talk may be boring/uninspired.

**Note:** You are required to take the biology assessment test. If you do not, your grade will be an Incomplete until you do take it. The date, time, and location of the exam will be announced later in the semester.