

Biology 490 – Senior Seminar

Term: Fall 2010

Days: Tues

Room: Henry 106

Time: 830-920 am

Credit: 3 semester hours

Phone: 440 4204

Instructor: Helen Turner Ph.D.

E-mail: hturner@chaminade.edu

Office: Wesselkamper 116

Office Hours: by appointment

Required textbook: There are no required text or materials. The instructor will provide handouts on special topics. Students will obtain pertinent articles from database searches in consultation with the instructor and classmates.

Course description: Senior Seminar is intended to provide the biology student with the opportunity to learn about how scientists communicate about scientific findings through peer-reviewed publication. With the instructor's assistance, students will select topics from current biology research and lead discussions. The course culminates with a poster presentation of the reviewed topic.

Links to Biology Program Outcomes: Senior Seminar is designed to prepare the student for Senior Research (BI499) or for another successful research experience in which the student will (1) learn how to assess and evaluate published experimental work; (2) review, critique, and discuss recent findings in the biomedical literature; (3) identify and review major achievements in biological. The course will:

- 1) Instruct students in the scientific method as it is demonstrated in the peer-reviewed scientific publications of biomedical scientists.
- 2) Increase student understanding of living organisms and biomedical science
- 3) Develop the necessary professional skills in exploring, evaluating and accessing the literature of the life sciences.
- 4) Present scientific information in a professional manner to an audience of professional scientists and peers.
- 5)

Student learning outcomes: At the conclusion of this course students will demonstrate:

- 1) An understanding of the components of scientific publications, and the peer review process;
- 2) An understanding of the features of high-quality biomedical research in published form;
- 3) An understanding of some milestone achievements in life sciences;
- 4) The ability to evaluate scientific publications that are relevant to the student's interests;
- 5) The ability to perform a literature search and reference compilation of a bibliography;

- 6) The ability to produce a research paper that is authoritative and meets the standards for publication in a peer-reviewed journal.

Course Requirements:

The course is composed of:

1. Weekly discussion meetings with some assignments
2. You should aim to spend 3-6 hours per week on your literature research project

The required product of this course is:

A research review paper formatted in accordance with the guidelines for submission to the Journal of Experimental Medicine. It is strongly suggested that you look at example reviews from J. Exp Med and follow the author instructions at:

<http://jem.rupress.org/site/misc/fora.xhtml>

Required elements of the paper are:

- **Title page:** title of your research project, your name, course and date of submission.
- **Abstract:** standard abstract form that presents your research (including results) in less than 200 words.
- **Narrative**
- **Discussion and Conclusion**
- **Literature Cited:** provides a complete list of work cited. Comply with the style of the Journal of Experimental Medicine.
- The research must comply with the Chaminade University *Writing Across the Disciplines* standards.
- The research paper must be submitted as hard copy by 4pm on Friday December 3rd at 4pm to Dr Turner's office (WCS 116) and as a PDF emailed to hturner@chaminade.edu by the same deadline.

Grades:

Your final grade is based on:

	Points
Research Paper	100
Attendance and participation in weekly meetings	100
TOTAL	200

A	Excellent	>85%
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B	Good	>75%
C	Average	>65%
D	Below Average	>55%
F	Failure	<55%

Policies:

- Late assignments will not be accepted without prior written approval from the instructor.
- Students using cell phones in class will be asked to leave and will be marked as absent.
- All other academic policies specified by the University Catalog and Student Handbook 2010-2011 apply to this course.
- Details of the course may be subject to change.

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University Policy, Reminders, and notices:

1. Class begins each time exactly at 8AM – please be on time. Chronic tardiness will be viewed as absence from class. If you miss or are tardy for class, please note that we will proceed without you and you will miss material; it is your responsibility to obtain missed lecture topics from your classmates who were in attendance.
2. Please show respect to your fellow classmates: turn off cell phones and other electronic devices. Please respect classroom policies regarding food and other potential distractions.
3. No make up time will be granted in the event the student fails to present a poster at the end of the semester at the appointed time. In the event of illness, a Doctor's note will be expected and accommodations will be made on a case-by-case basis.
4. You are also expected to have read and to abide by the "Student Rules of Conduct" which are available in your copy of Chaminade University's Student Handbook.
5. Regarding ADA accommodations for extra time on exams and quizzes; Please be aware that I can only accommodate your requests if you have a documented ADA agreement with Chaminade University on file at the Counseling Center.
6. Turn in your assignments as scheduled. The Biology Department's policy of one grade level reduction for lateness within 24 hours of due date and failure after 24 hours will be followed

Week	Topic	What you should be doing during the week	Deadlines
1	Introduction and pre-test Elements of the publication process, different types of publication		
2	Navigating literature databases, provision of suggested topics for research papers	Check out suggested database websites and familiarize yourself Choose a research topic of interest	
3	Discussion of students' selected research topics	Work with Dr Turner to state a hypothesis for your project Download 5 review papers in your field of research, read them	Provide Dr Turner with a one line title for your research project.
4	How to read a paper	Download primary papers in your field, read them	
5	Judging scientific data	Download primary papers in your field, read them. Start on outline of your poster.	
6	Discussion of research topics	Download primary papers in your field, read them. Develop poster.	Provide Dr Turner with a list of the papers you are going to cite (a screendump from PubMed will be acceptable).
7	Discussion of research topics	Download primary papers in your field, read them. Develop poster.	
8	How to write an abstract, provision of unpublished paper by HT	Download primary papers in your field, read them. Develop poster.	
9	Discussion of research topics	Download primary papers in your field, read them. Develop poster. Work on Keystone abstract.	Meet with Dr Turner to review ideas and poster.
10	Discussion of research topics	Download primary papers in your field, read them. Develop poster.	

11	Discussion of research topics	Download primary papers in your field, read them. Finalize poster. Work on Keystone abstract.	Meet with Dr Turner to work on poster.
12	Discussion of research topics	Get poster printed. Practice poster presentation. Work on Keystone abstract.	Draft of poster due by 9am Wednesday.
13	Poster presentations this week	Work on Keystone abstract.	
14	Fun exercise		
15	Submit final abstract to Dr Turner, wrap – up and evaluation		Submit abstract to Dr Turner by 9am Friday.

Materials available from Dr Turner (email requests).

1. PDF of the Keystone Abstract submission form
2. Powerpoint template for your poster
3. Electronic and hard copies of unpublished paper.