FALL 2014
NUTR 880: Elements of Being a Scientist
Monday 1:00 pm to 3:50 pm
241 Rosenau

Instructors: Dianne Ward, Steven Zeisel and Barry Popkin

Prerequisites: Students should have discussed their dissertation topic with an advisor and should have an idea about a potential topic. During the summer, Professors Ward, Popkins and Zeisel will have contacted all students regarding selection of a dissertation topic. Students should have discussed the course with one of the three instructors prior to the first class.

Course Description: The course will focus upon the key elements that contribute to a successful career as a scientific researcher. These include: teaching skills; preparation of scientific presentations and manuscripts; grant writing and a series of related issues, in particular scientific ethics and care of human subjects and animals. The major emphasis will be on the preparation of an NIH-style grant proposal. If possible, this should relate closely to the dissertation topic of the student.

Recommended Readings: The major items are provided to you electronically each week of the course at: http://sakai.unc.edu

We also think that you will benefit from reading the following books as you work on your grant:

Krathwohl, DR, Smith, NL. (2005) How to Prepare a Dissertation Proposal, Syracuse University Press, Syracuse NY

The Lab – http://ori.hhs.gov/TheLab
(included on Sakai reading list)

http://www.nap.edu/catalog.php?record_id=12192

Course Objectives: Upon completion of this course, students will:

1. Have experience organizing and preparing an NIH-style grant application;
2. Have experience presenting a scientific talk, including answering critical questions;
3. Know the principles of preparing scientific graphics;
4. Know the principles of use of humans and animals in research;
5. Have discussed current viewpoints about scientific ethics;
6. Know how to identify potential sources of research funding;
7. Have experience with peer review of research grants.
Course Deliverables: There are four sets of work required for the course:

1. Scientific Talk: The student will learn to prepare and present slides for a 10-minute talk similar to one that might be presented at a scientific meeting. Hopefully you will use data appropriate to your proposal; if you don’t have your own data you can use your mentor’s data. This will be taped for you to view and have the rare opportunity to see yourself as others see you. **The dates for these presentations are October 6 and 13.**

2. The Grant: NIH proposal due **Friday, November 21.** It is desirable and definitely acceptable that you have plans to use the proposal for your dissertation and a grant application. The NIH-type proposal has the virtue of being the most commonly used and the most demanding funding source. This will introduce you to the logic of this process and prepare you for developing any related proposal. The purpose of this course will be to make the grant development process as realistic as possible and you are expected to use and interpret the NIH guidelines as the rules for your proposal. Feasibility of your plan and the proposal of a grant budget commensurate with your proposal and the gains in knowledge expected are important. A draft budget, including a written justification, is expected.

3. The Minigrant: A short proposal prepared for the American Society for Nutrition (ASN) pre-doctoral fellowship program or an equivalent predoctoral proposal for a student award is due **Friday, November 7.** The student proposal will be a short version of what you will write up for the longer NIH proposal. You can identify which award you are going to apply for, we suggest you look at: [http://www.nutrition.org/about-asn/awards/pre-doctoral/](http://www.nutrition.org/about-asn/awards/pre-doctoral/)

4. Peer Review: There will be two points in the course when the student will provide NIH-style reviews of other grants. One will be early in the course and encompass the review of an existing grant proposal by a real scholar. The second will be through the opportunity to experience the peer review as a primary and secondary reviewer of two proposals prepared by classmates. In both cases, students will be required to prepare and turn in written critiques of grants. **We will simulate the real grant review cycle. This means there is no flexibility in deadline for peer review (December 1).**

5. Regular Review of Peers’ Work: In addition to the above deliverables we expect that you will read pieces of grants that you colleagues are writing and come to class prepared to constructively discuss their work. **This does not mean reading the work minutes before the discussion.** All students are expected to actively be involved in all sessions. All required materials and handouts should be read ahead of time and students should come to the classroom ready to participate.

**Grading:**

Your grade will be based on performance in the following:

- Grant proposal: 40%
- Predoctoral fellowship: 10%
- Class participation (weekly critiques): 30%
- Scientific talk: 10%
- Peer reviews: 10%

6/6/2014