

University of Guelph
College of Biological Science
Department of Human Health and Nutritional Sciences
Course Outline
HBNS*6010: Seminar in Human Biology and Nutritional Sciences
Fall 2007, Winter 2008, Summer 2008

Instructor: Alison M. Duncan, Ph.D., R.D.
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Office Hours: anytime by appointment

Class Meeting Time: TBA.

Course Description:

This course will provide a forum for community and communication among M.Sc. (coursework and project) students and will be led by the Assistant Graduate Coordinator. This is a graduate level course designed to explore issues and concepts related to the process of science including its comprehension, interpretation and communication. Students will gain a deeper appreciation for the value of all levels of research through a detailed exploration of experimentation at the cell culture, animal and human levels. The ability to give and receive criticism in the scientific arena will be explored in a class session and practiced through an assignment. Research communication will be studied through a workshop and students will develop an appreciation for process-oriented scientific issues such as the allocation of credit, the management of data and the publication process. Students will also be expected to attend scheduled HHNS departmental seminars during the Fall and Winter semesters, which may be discussed and reflected upon during HBNS*6010 class meetings. Although students formally register for this course in the Summer semester, the class meets on a periodic basis throughout the year to allow it to serve as a community resource for the M.Sc. (coursework and project) program.

Course Objectives:

Upon completion of this course, students should:

1. Appreciate the issues involved in cell culture, animal and human experimentation.
2. Have an improved ability to interpret cell culture, animal and human studies.
3. Learn how to give and receive criticism.
4. Have an improved ability to communicate research.
5. Gain an appreciation for specific issues involved in the responsible conduct of science.
6. Have improved scientific writing and oral presentation skills.

Course Evaluation:

Multi-Level Research Assignment	40%
Multi-Level Research Oral Presentation	25%
Critical Feedback Assignment	30%
Class Participation	5%

Growing Class Schedule:

The class schedule will be determined as the year progresses. We will likely have a total of 12-15 class meetings. Topics to be covered will include:

- Exploration of animal experimentation
- Exploration of cell culture experimentation
- Research communication
- Giving and receiving criticism
- Understanding statistics
- Discussion of reasonable conduct of science
- 2-3 session of student presentations for multi-level research projects

Multi-Level Research Assignment (worth 40%)

The purpose of this assignment is to appreciate the value of multi-level research in the overall understanding and progression of a selected topic. You will select a topic of your choice and explore its literature at the cell culture, animal and human experimentation level. For this assignment, you will:

- choose a topic and have it approved by the instructor
- find articles at the level of each type of research (cell culture, animal and human) using a literature review approach
- work towards understanding the progression of your topic through each level of research
- organize your paper into sections including: introduction, cell culture experimentation, animal experimentation, human experimentation, summary/conclusions
- within each research level section, describe the research that has been done; comment on the relevant issues and assess its contribution to the progression of your topic; what is its value; what are the strengths/limitations, etc.
- in your summary/conclusion section, pull the levels of research together; speak to the value of multi-level research; comment on the knowledge gained by the totality of the evidence for your selected topic

Format Requirements: 10-15 pages plus references and cover page; computer printed, double-spaced, single-sided, due date to be announced. There will be a late penalty of 5% per day including weekend days.

Multi-Level Research Oral Presentation (worth 25%)

The purpose of this presentation is for you to share your experiences with your classmates and to improve your oral communication skills. These presentations will be scheduled toward the end of the Summer semester

Format Requirements: 15 minutes plus questions; powerpoint slides

Critical Feedback Assignment (worth 30%)

The purpose of this assignment is to practice your critical feedback skills. To do this, you will participate in the peer-review process by providing a review of a scientific article. You can choose the article from a short list of articles provided by the instructor. You will then proceed as if you have been sent this manuscript for review. To guide you in your review, you will be provided with instructions similar to those provided to journal reviewers. In addition, you will use the concepts and approaches learned in your class session on giving and receiving criticism.

Format Requirements: no page requirement, computer printed, single-sided, due date to be announced. There will be a late penalty of 5% per day including weekend days.