Course Description
This course will provide a forum for community and communication among M.Sc. Coursework students and will be led by the Coordinator of the M.Sc. Coursework program. 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 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. Other skills will be developed such as scientific writing, oral presentations and exposure to statistics. 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 HHNS*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 program.

Instructor
Alison M. Duncan, Ph.D., R.D.
Office: ANNU 347
Phone: 824-4120 ext. 53416
Email: amduncan@uoguelph.ca

Office Hours: anytime by appointment

Class Schedule
We will meet 3-4 times per semester. Times will be announced over email and will not conflict with any other HHNS graduate course.
Learning Goals
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 skills.

Course Resources
Emails will go out to the class with materials for each class session.

Course Content (Tentative Class Schedule):

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Class Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Date: Thurs. Sept 17, 2015 Time: 10:30am-11:30am Location: FS146</td>
<td>Class Meeting Introductions, Coordination, Discussion</td>
</tr>
<tr>
<td>2</td>
<td>Date: Thurs. Oct 8, 2015 Time: 9am-noon Location: FS146</td>
<td>Getting Started on Your Research &amp; Oral Presentation Skills The Learning Commons Lenore Latta, Jason Dodd</td>
</tr>
<tr>
<td>3</td>
<td>Date: Tues. Nov. 3, 2015 Time: 9:30am Location: FS146</td>
<td>Communication of Research from a Journalist’s Perspective Owen Roberts, Ph.D., Director of Research Communications, University of Guelph</td>
</tr>
<tr>
<td>4</td>
<td>Date: Thurs. Dec. 3, 2015 Time: 3pm Location: FS146</td>
<td>An Exploration of Animal Experimentation Lecture and Discussion Justine Tishinsky, Ph.D. Human Health and Nutritional Sciences</td>
</tr>
</tbody>
</table>

Manuscript Review Assignment (worth 40%)
The purpose of this assignment is to practice your review feedback skills. To do this, you will participate in the peer-review process by providing a review of a scientific article of your choosing (please have it approved by the instructor). You will then proceed as if you have been
sent this manuscript for review. To guide you in your review, we will discuss relevant concepts and approaches in a class session on giving and receiving criticism.

Format Requirements: No page requirement. Use subheadings and bullet points. Email in Word and include a PDF of the article. Due during Summer semester.

**Multi-Level Research Assignment (worth 60%)**

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 levels. For this assignment, you will:

- choose a topic of interest to you and have it approved by the instructor
- find at least 5 articles from each level of research (cell culture, animal, human)
- organize your paper into sections including: introduction, cell culture experimentation, animal experimentation, human experimentation, summary/conclusions
- within each research level section, summarize the research that has been done. Then provide commentary on how this level of research contributes to the progression of this topic. This commentary is the core of the assignment; put thought into the relative value of each level of research to advancing knowledge on this topic.
- in your summary section, integrate your comments and ideas, 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; double-spaced. Email in WORD. Due during Summer semester.

### Methods of Assessment

<table>
<thead>
<tr>
<th>Form of Assessment</th>
<th>Weight of Assessment</th>
<th>Due Date of Assessment</th>
<th>Course Content /Activity</th>
<th>Learning Outcome Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manuscript Review Assignment</td>
<td>40%</td>
<td>TBD</td>
<td>Lecture, non-lecture</td>
<td>1, 2, 4, 5, 6</td>
</tr>
<tr>
<td>Multi-Level Research Assignment</td>
<td>60%</td>
<td>TBD</td>
<td>Lecture, non-lecture</td>
<td>3, 4, 5, 6</td>
</tr>
</tbody>
</table>

### Course and University Policies

**When You Cannot Meet a Course Requirement**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a
teaching assistant) in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration.

**Accessibility**
The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services (formerly the Centre for Students with Disabilities) as soon as possible.

For more information, contact Student Accessibility Services at 519-824-4120 ext. 56208 or email csd@uoguelph.ca.

**Academic Misconduct**
The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar.

**E-mail Communication**
As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

**Drop Date**
The last date to drop one-semester courses, without academic penalty, is the 40th class day. To confirm the actual date please see the schedule of dates in the Undergraduate Calendar. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar.
**Copies of out-of-class assignments**
Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

**Recording of Materials**
Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

**Grading**
Please submit your assignments electronically to the course instructor. Late penalties of 5% per day will apply.

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**Campus Resources**

**If you are concerned about any aspect of your academic program:**

Make an appointment with a Program Counsellor in your degree program.

**If you are struggling to succeed academically:**

There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist.

**If you are struggling with personal or health issues:**

Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance.

Student Health Services is located on campus and is available to provide medical attention.

For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations.

**If you have a documented disability or think you may have a disability:**

Student Accessibility Services (SAS) formerly Centre for Students with Disabilities can provide services and support for students with a documented learning or physical disability. They can also provide information about how to be tested for a learning disability.