1 Course Details

1.1 Calendar Description

This course provides an opportunity for directed hands-on projects involving live animals and laboratory techniques. A set of selected projects will be provided by Animal Biosciences faculty within their broad fields of study.

Pre-Requisites: 14.00 credits including ANSC*3080
Restrictions: Restricted to students in BSCH.ABIO,BSAG.ANSC and BBRM.EQM. Instructor consent required.

1.2 Course Description

Over the course of the semester, groups of students will be involved in conducting a single experiment on agricultural animals at one of the research stations. Students will be provided with an outline for the experiment but will develop their own hypotheses and experimental plan and execute data collection. Individual groups conducting separate projects will meet separately for the development of hypotheses, experimental design, data collection and analysis. Students will be responsible for measuring behaviour, monitoring growth, production or reproduction and collecting blood or saliva. Students will learn and practice sampling techniques and assays for measuring hormones or metabolites. They will also analyze data and interpret and present their results in written and oral format.

Students will meet weekly (Tuesday at 2:30 p.m., ANNU Room 030 or connect by Zoom) for presentations on techniques used in different areas of research and to present group status reports. This will expose students to the variety of experimental approaches used in various fields of research. Students will be expected to integrate or consider the impact of these ideas in their experimental design.

1.3 Timetable

Tuesday 2:30 p.m. - 5:30 p.m., ANNU 030, or connect by zoom; other times as required
Timetable is subject to change. Please see WebAdvisor for the latest information.

1.4 Final Exam

There is no final exam. The different groups will present their results during the final class (April 5) and individual lab reports are due the end on the final week (April 8)

2 Instructional Support

2.1 Instructional Support Team

Instructor: James Squires  
Email: jsquires@uoguelph.ca  
Telephone: +1-519-824-4120 x53928  
Office: ANNU 146  
Office Hours: By Appointment

Instructor: Lee-Anne Huber  
Email: huberl@uoguelph.ca  
Office Hours: By Appointment

2.2 Teaching Assistants

Teaching Assistant (GTA): Nicole Gregory  
Email: ngregory@uoguelph.ca  
Office Hours: By Appointment

Teaching Assistant (GTA): Munene Kithama  
Email: mkithama@uoguelph.ca  
Office Hours: By Appointment

2.3 Netiquette Expectations

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

• Posting inflammatory messages about your instructor or fellow students
• Using obscene or offensive language online
• Copying or presenting someone else’s work as your own
• Adapting information from the Internet without using proper citations or references
• Buying or selling term papers or assignments
• Posting or selling course materials to course notes websites
• Having someone else complete your quiz or completing a quiz for/with another
student
• Stating false claims about lost quiz answers or other assignment submissions
• Threatening or harassing a student or instructor online
• Discriminating against fellow students, instructors and/or TAs
• Using the course website to promote profit-driven products or services
• Attempting to compromise the security or functionality of the learning management system
• Sharing your user name and password
• Recording lectures without the permission of the instructor

2.4 Communicating with Your Instructor
During the course, your instructor will interact with you on various course matters on the course website using the following ways of communication:

• **Announcements**: The instructor will use Announcements on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.

• **Questions**: All questions should be directed to the TA first for resolution. If necessary, it will be escalated to the instructor.

• **Email**: If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will attempt to respond to your email within 24 hours.

3 Learning Resources

3.1 Required Resources
Required Texts (Textbook)
None

3.2 Recommended Resources
Recommended Texts (Textbook)
None

3.3 Additional Resources
Lab Manual (Lab Manual)
3.4 Project Description

Project 1 – Piglet feed management during the post-weaning period

Background
Piglets experience a post-weaning growth lag that is related to poor feed intake, limited gut capacity, exposure to novel pathogens, introduction of feed allergens (e.g. soybean meal), and social stressors (i.e. establishment of a new social hierarchy). To combat this post-weaning growth lag, nutritionists and producers often feed very expensive and highly digestible diets to promote feed consumption. In addition, the search for alternatives to in-feed antibiotics as growth promoters is on going.

It is common for nursery piglets to be fed multiple phases of diets with decreasing nutrient density and digestibility. Based on mathematical models, we estimate the optimum body weight to conduct feed switches. However, the piglet itself may be more effective at eating to its nutrient requirements given the choice between high and low nutrient density diets.

Additionally, when piglets are mixed into new social groups (i.e. litter mates are often separated) piglets are preoccupied with establishing new social hierarchies in the first several hours after weaning. During this time, piglets often do not explore the feeders or consume any feed. Adding feeders and feed after the initial social hierarchy is established may promote increased exploratory behaviour and an overall greater feed intake within the first 24 hours of weaning.

Objectives and overview
The objectives of this project are to determine the effects of various feed management strategies after weaning on feed intake, piglet growth, and feeding and social behaviour. Sixty four piglets will be obtained at the Arkell Swine research station on the day of weaning and randomly assigned to 1 of 16 identical nursery pens (ensuring that equal numbers of littermates are present in each pen). One of many different feed management strategies can be studied. For example:

1. Timing of feed introduction - In half of the pens feeders will be pre-filled with nursery diet (standard practice; control group). In the remaining pens feeders and feed will not be provided until 4-6 hours after mixing (treatment group). Behaviour will be monitored immediately after mixing and 4-6 hours later (when feeders are added to treatment pens). Collect saliva samples for cortisol analysis throughout the day. Monitor per pen daily feed intake and individual piglet body weights.

2. Feed selection by piglets post weaning - In half of the pens 2 feeders will be provided, one with a high and one with a low nutrient density feed (treatment). In the remaining pens, two feeders will be provided with a standard ration (control; nutrient composition is the average of the treatment diets). Monitor feeding behaviour, piglet growth rates, and feed disappearance from each of the feeders.
3. Test different feed additives to maximize feed intake and growth after weaning (e.g.,
flavours, exogenous enzymes, new feed ingredients like insect meal, or highly digestible
enzyme-treated soybean meal).

4. Offsetting social and dietary stress at weaning- At weaning half of the litters will be mixed
and the other half weaned into a pen with only littermates. 2-days post-weaning the litters
kept within litter groups will be mixed. Aggression, stress (i.e. Cortisol), feeding latency (at
weaning and after mixing), feed intake and growth can be monitored.

References:

Bruni A, Quinton VA, Widowski TM. 2007. The effect of feed restriction on belly nosing

Colson V, Martin E, Orgeur P, Prunier A. 2012. Influence of housing and social changes on

diets improve the performance of low birth weight pigs to 10 weeks of age1. Journal of
Animal Science 92: 4741-4750.

Dybkjaer L, Jacobsen AP, Togersen FA, Poulsen HD. 2006. Eating and drinking activity of
newly weaned piglets: Effects of individual characteristics, social mixing, and addition of

Ettle T, Roth FX. 2005. Dietary preferences for feeds varying in threonine concentration by the


Pluske JR. 2013. Feed- and feed additives-related aspects of gut health and development in

Pluske, J. R. 2016. Invited review: Aspects of gastrointestinal tract growth and maturation in

1027.
3.4 Project Description

Project 2 – Investigating the use of pain control for sows post-farrowing to improve performance

Background

Piglet death during the birth process and in the first few days of life is increasing and represents a significant economic loss to the swine industry. The increase in litter size that is occurring in swine production is the main factor contributing to this trend. When more pigs are born in a litter, the duration of the birth process is longer and the average birth weight of the piglets is smaller. Lengthy farrowing contributes to stillbirth or weak, anoxic piglets. Small birth weight contributes to higher neonatal mortality. Administering non-steroidal anti-inflammatory drugs (NSAIDs) to sows around the time of farrowing could improve the comfort level of the sow and consequently, shorten the birth process, and improve piglet outcomes.

Objectives and overview

The primary objective of this research is to determine if sow performance during lactation is improved if the sow is administered a non-steroidal anti-inflammatory drug (NSAID) during or shortly after farrowing to help reduce inflammation and pain. Ideas for potential sub-objectives:

- Evaluate video recordings of the birth process to determine birthing interval (e.g., between liveborn piglets and stillborn piglets), orientation of piglets at birth, and/or time between last piglet born and expulsion of the placenta and correspond to subsequent piglet growth/survivability,
- Determine placenta weight and efficiency in relation to litter size and piglet birth weights
- Relate interventions (e.g., induction, oxytocin use, antibiotic use) to offspring outcomes (e.g., growth and preweaning mortality)
- Changes in sow body weight, behavior, and stress response

References:


3.4 Project Description

Project 3: Impact of feeding broiler breeders hydroxychloride trace minerals on lifetime reproductive performance and subsequent impact on chick quality, skeletal development, and growth performance

Background

Chick quality is a major factor determining broiler chicken livability and growth performance through to slaughter. Trace minerals (TM) in skeletal reserve at hatch play a crucial role in setting up the young chick up for a healthy and productive life. Three TM namely, copper, zinc, and manganese are pivotal for the breeder reproductivity, quality of settable eggs, embryonic skeletal development, hatchability, and chick immunocompetence. Moreover, dietary form of TM influences excretion of nutrients in the manure with implication to environmental sustainability.

Objectives and Overview

The overall objective of the present study is to evaluate the effects of hydroxychloride copper, zinc, and manganese in comparison with organic sources on lifetime broiler breeder
reproductive performance and subsequent impact on progeny skeletal development and growth performance through to slaughter weight.

1. Effects of feeding broiler breeders hydroxychloride copper, zinc, and manganese in comparison with organic equivalent from week 22 to 64 weeks of age on egg production, egg quality, egg fertility and hatchability, and nutrient excretion. **Ideas for potential sub-objectives:**
   
a. Hatch chicks (eggs will be fertile), check hatchability, fertility rate
   b. Egg laying behaviour (number of eggs on floor vs. nest), breeders are not smart and this is huge industry problem, floor eggs have poor hatchability and the hatchery rejects them. Egg count will also be recorded daily so egg production rate can be calculated and egg quality (e.g., shell breaking strength, internal, yolk color, albumen height etc) can be assessed.
   c. Blood samples can be taken for upstream analyses
   d. Excreta can be collected for metabolite analyses

**Dietary treatments:**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>No. of animals</th>
<th>Test article</th>
<th>Inclusion level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>264</td>
<td>Hydroxy mineral micropremix</td>
<td>2.5 kg/Mt feed</td>
</tr>
<tr>
<td>2</td>
<td>264</td>
<td>Organic mineral micropremix</td>
<td>1. kg/Mt feed</td>
</tr>
</tbody>
</table>

**Experimental animals:**

- **Species**  
  Broiler breeders

- **Breed**  
  Ross 708

- **Age**  
  ~22 weeks of age
**Sex**  
Hens and cocks

**Number of animals per pen/cage**  
20 hens, 2 cocks/pen (24 floor pens; total; 528 birds)

**Sex ratio per pen/study**  
90% hens; 10% cocks

Measurements that will be collected:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health</td>
<td>Daily recordings</td>
</tr>
<tr>
<td>Mortality/morbidity</td>
<td>Daily morbidity and mortalities will be recorded including apparent cause of death or reason for culling</td>
</tr>
<tr>
<td>Barn temperature records</td>
<td>Barn temperature will be recorded (daily minimum and maximum) as per facility SOP</td>
</tr>
<tr>
<td>Breeder Body weight and count</td>
<td>Counts and live weights of all cages will be recorded in weeks 22, and 64 of the study.</td>
</tr>
<tr>
<td>Feed consumption</td>
<td>Adjusted as per breeder curve</td>
</tr>
<tr>
<td>Egg count</td>
<td>Egg counts will be recorded daily</td>
</tr>
<tr>
<td>Egg weights</td>
<td>Egg weights (to nearest 0.1g) will be collected from all pens on a single day per week in weeks 34, 44, 54 and 64.</td>
</tr>
<tr>
<td>Egg quality</td>
<td>Number of deformed eggs will be recorded (cracks, punctures, excess calcium deposits, abnormal shape, dirty eggs) from all eggs</td>
</tr>
<tr>
<td>Parameter</td>
<td>Frequency</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>on a single day per week at weeks 34, 44, 54 and 64.</td>
</tr>
<tr>
<td></td>
<td>30% of eggs per sampling date/experimental unit – measurement of haugh unit, albumin height, eggshell thickness, and breaking strength.</td>
</tr>
<tr>
<td>Hatching quality</td>
<td>30% of eggs collected throughout weeks 34, 44, 54 and 64 will be marked by experimental unit and set at Arkell hatchery, eggs will be candled on day 19 and viable eggs transferred to hatchers. Number of fertile eggs, hatched chicks per experimental unit will be recorded.</td>
</tr>
</tbody>
</table>

References


3.4 Project Description

Project 4- Egg quality and behaviour of hens housed in different systems or different heritage breeds

Background

The Canadian egg industry is in transition because of pressure to adopt alternative housing and to reduce the use of sub-therapeutic preventive antimicrobials (AGP). With respect to housing, shift from conventional cages (CC) to cages with furnishings (conventional cages with furnishings; not industry standard), enriched colonies cage (EC) and cage-free (AV; lower density than industry standard) operations will mean more bird activity (scratching, foraging and dust bathing) inside the house, potentially leading to increased airborne pollutants like dust and ammonia. A move from CC to either an enriched cage or a non-cage system may affect the safety or quality, or both, of the eggs laid by hens raised in this new environment. The safety of the eggs may be altered microbiologically through contamination with pathogens. Quality may be affected through changes in the integrity of the shell, yolk, or albumen along with changes in function, composition, or nutrition. An understanding of these different effects is prudent as the egg industry embrace alternative housing system is undertaken. Moreover, certain heritage breeds are becoming popular with backyard and organic systems. In addition, many heritage breeds are considered ‘dual purpose’ as they can be used for both egg and meat production. As these breeds have not undergone intensive selection for egg production, egg quality characteristics as well as hen behaviour vary widely among genotypes. Characterizing egg production, quality, and hen behaviour will assist producers in selecting the best genotype for their farming objectives.

Available housing systems (similar genetics in each system):
Aviary – on trial with Dr. Tina Widowski

Enriched cages – on trial with Dr. Elijah Kiarie

Enriched cages – 2 rooms general (not on study)

Available genetics (all housed in the same system):

- White Leghorn
- Columbian Rock
- Rode Island Red
- Plymouth Barred Rock

**Objectives and overview**

The objective of this project is to conduct a survey of egg quality characteristics of eggs produced by Arkell general flocks housed in enriched cages and aviary systems. Examples

1. Record number (frequency) of eggs found on the floor and nests in aviary
2. Record number (frequency) of cracked soft-shelled, and dirty eggs in a population of eggs collected in a day as per Arkell schedule over a period
3. Take samples of eggs and conduct eggshell (thickness, breaking strength) and internal (Hugh unit, yolk color) quality measurements in sub-samples
4. Assess behavioural differences between birds kept in conventional cages and in alternative housing.
5. Assess egg production, egg/eggshell quality, and hen behaviour of various heritage breeds.

**References**

NFACC. 2017. Code of Practice for the Care and Handling of Pullets and Laying Hens. Egg Farmers of Canada and the National Farm Animal Care Council Ottawa, Canada


**3.4 Course Technology and Technical Support**

CourseLink
This course is being offered using CourseLink (powered by D2L’s Brightspace), the University of Guelph's online learning management system (LMS). By using this service, you agree to comply with the University of Guelph’s Access and Privacy Guidelines. Please visit the D2L website to review the Brightspace privacy statement and Brightspace Learning Environment web accessibility standards.


**Technical Support**

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

Email: courselink@uoguelph.ca

Tel: 519-824-4120 ext. 56939 Toll-Free (CAN/USA): 1-866-275-1478

**Support Hours (Eastern Time):**

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

**Teams (via Office 365)**

Office 365 Teams is a collaboration service that provides shared conversation spaces to help teams coordinate and communicate information. This course may use Teams for one on one meetings with your Instructor. It is recommended that you use the desktop version of Teams. As a student you are responsible for learning how to use Teams and its features.

For Teams Support visit the CCS website for more information.

https://www.uoguelph.ca/ccs/services/office365/teams

**Zoom**

This course may use Zoom for some lectures and the link is available on the course calendar. Check your system requirements to ensure you will be able to participate.

https://opened.uoguelph.ca/student-resources/system-and-software-requirements
3.4 Technical Skills

Technical Skills

As part of your learning experience, you are expected to use a variety of technologies for assignments, lectures, teamwork, and meetings. In order to be successful in this course you will need to have the following technical skills:

- Manage files and folders on your computer (e.g., save, name, copy, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as Dropbox, Quizzes, Discussions, and Grades (the instructions for this are given in your course);
- Access, navigate, and search the Internet using a web browser (e.g., Firefox, Internet Explorer); and
- Perform online research using various search engines (e.g., Google) and library databases.

3.4 Library Access

As a student, you have access to the University of Guelph’s library collection, including both physical and electronic materials. For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library’s website.

If you are studying off campus and would like to access the library’s electronic resources, use the Off Campus Login and login using your Single Sign On credentials or using your last name and library barcode.

https://www.lib.uoguelph.ca/

https://www.lib.uoguelph.ca/campus-login
4 Learning Outcomes

Specific Learning Outcomes:

The goal of this course is to introduce you to the world of independent research.

By the end of the course, you will:

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. be familiar with issues of animal care and safety in the laboratory
2. be familiar with the development of hypotheses and the design of experiments
3. be exposed to laboratory techniques used in different areas of animal biology research
4. develop skills for observing and measuring animals' behavioural and endocrine responses to the physical, social or nutritional environment
5. be able to organize your group time to perform experiments, collect and analyse data
6. critically evaluate and interpret your results to integrate various measures of response in order to deepen understanding of biological function
7. write a scientific paper and present your results to the class

5 Teaching and Learning Activities

5.1 Lectures

PLEASE NOTE THIS SCHEDULE IS BY WEEK- CLASS IS ALWAYS ON THE TUESDAY BUT YOU MUST SCHEDULE ADDITIONAL TIME TO COMPLETE LAB WORK.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Lecture</th>
<th>Lab Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 10</td>
<td>Introduction to the course and presentation of projects</td>
<td>Organize groups, choose topic and discuss/plan the literature review</td>
</tr>
<tr>
<td>Jan. 17</td>
<td>Guest lecture on Behaviour data collection techniques</td>
<td>Develop hypotheses and work schedule</td>
</tr>
<tr>
<td></td>
<td>Develop hypotheses and work schedule</td>
<td></td>
</tr>
<tr>
<td>Week of</td>
<td>Lecture</td>
<td>Lab Work</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Jan. 24</td>
<td>Presentation of research protocols</td>
<td>Set up experiments</td>
</tr>
<tr>
<td>Jan 31</td>
<td>Animal Care (Dr. Anna Bolinder)</td>
<td>Data and sample collection</td>
</tr>
<tr>
<td></td>
<td>Farm and Lab Safety (Christi Cooper, EHS)</td>
<td></td>
</tr>
<tr>
<td>Feb. 7</td>
<td>Guest Lecture Dr. R. Friendship</td>
<td>Data and sample collection</td>
</tr>
<tr>
<td>Feb. 14</td>
<td>Groups present status reports</td>
<td>Data and sample collection</td>
</tr>
<tr>
<td>Feb. 21</td>
<td><strong>Winter Break</strong></td>
<td><strong>Winter Break</strong></td>
</tr>
<tr>
<td>Feb 28</td>
<td>Hormone assay validation</td>
<td>Validation study</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data and sample collection</td>
</tr>
<tr>
<td>Mar. 7</td>
<td>Groups present status reports</td>
<td>Hormone assays</td>
</tr>
<tr>
<td>Mar. 14</td>
<td></td>
<td>Hormone assays completed</td>
</tr>
<tr>
<td>Mar. 21</td>
<td>Discussion of data analysis and report preparation</td>
<td>Data analysis</td>
</tr>
<tr>
<td>Mar. 28</td>
<td>Draft report for comments</td>
<td></td>
</tr>
<tr>
<td>Apr 4</td>
<td>Lab report due and presentation of projects</td>
<td></td>
</tr>
</tbody>
</table>

### 5.2 Labs

The class will be divided into groups, with each group conducting a different project at either Arkell Poultry or Arkell Swine Research Stations. Students will focus on measuring performance, behaviour and endocrine changes in the animals.
The potential projects are:

Project 1 – Piglet feed management during the post-weaning period

Project 2 – Investigating the use of pain control for sows post-farrowing to improve performance

Project 3: Impact of feeding broiler breeders hydroxychloride trace minerals on lifetime reproductive performance and subsequent impact on chick quality, skeletal development, and growth performance

Project 4- Egg quality and behaviour of hens housed in different systems or different heritage breeds

Each group of students will conduct one experiment and individuals within each group will receive training and be assigned responsibility for animal handling, sample collection and hormone analysis. Sample and data collection and analytical procedures will be conducted both during and outside of scheduled lab time as arranged by the groups. Each group member is expected to do their fair share of the work and to participate in group meetings. Evaluations of all individual group members will be conducted at the end of the course. Technical assistance will be provided as needed. Schedules vary with experiment but all animal measurements and sampling will be completed by early March.

Each member of the group will receive a complete data set for their experiment and will write an individual lab report in the format of a journal paper (Journal of Animal Science). Please refer to links under “Writing Up your Report” posted on CourseLink for instructions, format and help guides.

Each group will present their experimental results in the last week of the semester. The format of the presentation may be similar to that of the lab report.

6 Assessments

6.1 Marking Schemes & Distributions

<table>
<thead>
<tr>
<th>Name</th>
<th>Scheme A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review</td>
<td>15</td>
</tr>
<tr>
<td>Presentation of Research Protocol</td>
<td>10</td>
</tr>
<tr>
<td>Refinement of Wet Lab Protocol</td>
<td>5</td>
</tr>
<tr>
<td>Laboratory Report - Journal Format</td>
<td>40</td>
</tr>
<tr>
<td>Presentation of Results</td>
<td>20</td>
</tr>
</tbody>
</table>
6.2 Assessment Details

**Literature Review (15%)**
- **Date:** Tue, Jan 25
- **Learning Outcome:** 2, 3, 4, 5
- Development of Hypotheses and Experimental Design

  15% - Individual Mark

**Presentation of Research Protocol (10%)**
- **Date:** Tue, Jan 25
- **Learning Outcome:** 2, 3, 4, 5, 6

  10% - Group Mark

**Refinement of Wet Lab Protocol (5%)**
- **Date:** Tue, Mar 8
- **Learning Outcome:** 1, 3, 5

  5% - Individual Mark

**Laboratory Report - Journal Format (40%)**
- **Date:** Fri, Apr 8
- **Learning Outcome:** 4, 5, 7

  40% - Individual Mark

**Presentation of Results (20%)**
- **Date:** Tue, Apr 5
- **Learning Outcome:** 4, 5, 6, 7

  20% - Group Mark

**Participation and Contribution for Group work (10%)**
- **Learning Outcome:** 6

  10% - Individual Mark

7 Course Statements

### 7.1 Grading Policies

Assignments should be submitted via dropbox by 4:30 p.m. on the due date. Late penalties of 2% per day will be assessed for late submissions.

### 7.2 Course Policy on Group Work

All groups will determine and agree to expectations for themselves and their fellow group
members using a contract with terms given below. At the end of the semester, group members will provide a review of themselves and their fellow group members regarding compliance with the expectations and contract. 10% of the course mark will reflect each student’s participation and contribution to the group.

**Group Contract**

List Group members:

Expectations (grade) for major project:

Five Processes for Effective Teams:

1. How will we make decisions? (e.g. consensus, leader dictates)
2. How do we make sure that everyone gets a chance to discuss or raise concerns?
3. How will we handle differences amongst us?
4. How will we ensure the completion of our work?
5. How will we change things that are not producing results?

Signatures:

---

**7.3 Dropbox Submissions**

Assignments should be submitted electronically via the online Dropbox tool. When submitting your assignments using the Dropbox tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommend you save your assignments to a cloud-based file storage (e.g., OneDrive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

It is your responsibility to submit your assignments on time as specified on the Schedule. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that technical difficulty is not an excuse not to turn in your assignment on time. Don’t wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support.
8 University Statements

8.1 Email Communication

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

8.2 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. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Graduate Calendar - Grounds for Academic Consideration
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions
https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

Graduate Calendar - Registration Changes
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-regregchg.shtml

Associate Diploma Calendar - Dropping Courses
https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be
8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website
https://www.uoguelph.ca/sas

For Ridgetown students, information can be found on the Ridgetown SAS website
https://www.ridgetownc.com/services/accessibilityservices.cfm

8.6 Academic Integrity

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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml

Graduate Calendar - Academic Misconduct
https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml
8.7 Recording of Materials

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

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph’s procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
https://www.uoguelph.ca/academics/calendars

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (https://news.uoguelph.ca/2019-novel-coronavirus-information/) and circulated by email.

8.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

8.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- https://news.uoguelph.ca/return-to-campuses/how-u-of-g-is-preparing-for-your-safe-return/
- https://news.uoguelph.ca/return-to-campuses/spaces/#ClassroomSpaces

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.