APBI 317: WELFARE AND ETHICS OF USING ANIMALS IN SCIENCE

COURSE INFORMATION

This is a 3-credit course. Class runs on Tuesdays and Thursdays from 12:30 – 2:00 pm PST online via Zoom (synchronously). Zoom meeting information can be found in Canvas under the 'Zoom' tab. There are no prerequisites for the course, just 3rd or 4th year standing. Note that while we will do our best to ensure that lectures are appropriate for a generalist audience, this is still an applied biology course and as such many of the readings and lectures will be scientific.

LAND ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on in their culture, history, and traditions from one generation to the next on this site.

CONTACTS

Teaching team	Contact Details	Office*
Instructor: Anna Ratuski	aratuski@mail.ubc.ca	MCML 170B
TA: Maya Bodnar	mayajb17@student.ubc.ca	Zoom

*In lieu of weekly office hours, students are welcome to arrange individual appointments.

COURSE INSTRUCTOR STATEMENT

Hello! I am a senior PhD candidate in the Animal Welfare Program at the University of British Columbia. Before coming here, I completed my BSc majoring in Biology with a minor in Psychology at Dalhousie University in Halifax, Nova Scotia. During my time at Dalhousie, I worked as a technician in an animal research facility caring for rats, mice, and rabbits. I came to UBC as an NSERC Undergraduate research assistant, joining the Animal Welfare Program to help conduct research focused on carbon dioxide euthanasia for rats. I enrolled as a graduate student in 2018, focusing my research on environmental enrichment for mice and rats housed in laboratories. During this time I have served as a reviewer for the UBC Animal Care Committee, and gained extensive experience as a teaching assistant for APBI 317, APBI 314, and APBI 398. I have published on rat aversion to carbon dioxide, housing refinements for breeding rats, and enrichment opportunities for mice. Currently I am conducting research on the use of positive reinforcement training for laboratory mice as well as other housing refinement strategies for rodents used in science. My goal is to deliver an engaging course that gets you interested in and thinking critically about lab animal welfare and ethical issues surrounding the use of animals in science.

COURSE CONTENT

For as long as animals have been used in science, there has been controversy based on differing views about the moral acceptability of using animals for this purpose. Controversy stems from public concerns about potential suffering, benefits of research, genetic modification and so on. In response, governing bodies, such as the Canadian Council on Animal Care, have been created to protect animals based on societal concerns and our current scientific understanding of the capacity of animals to sense and express pain, suffering, distress and harm, while at the same time maximizing the goals of the intended purpose for the use of animals.

In order to understand the context of current use of animals is science, this course will examine the debate surrounding animal use, including differing ethical perspectives and societal attitudes. Students will gain a nuanced understanding of the important ethical and scientific issues. Students will learn about current trends in the scientific use animals, and how their use is governed in Canada and elsewhere. Students will think critically about important aspects of governance such as the review of proposed research by animal ethics committees and implementation of the Three Rs.

Finally, a critical component for the ethical use of animals in science is based on our scientific understanding of the experiences of animals involved. Students will learn about contemporary topics related to the welfare of animals used in science, ranging from how we house to how we euthanize animals such as rodents and fish.

IMPORTANT DATES

- Last day to withdraw without a W standing: January 21st
- Midterm break: February 21st – 25th

Note: Course schedule for topics and readings is posted on Canvas under the 'syllabus' tab; this schedule is subject to change, pay attention to Canvas and class announcements for up-to-date information – please **ensure you have canvas notifications enabled!**

LEARNING OUTCOMES

Students will learn about:

- The use of animals in research, testing and teaching
- Societal perspectives regarding the use of animals in research
- Relevant ethical frameworks and the 3 Rs (Replacement, Reduction, and Refinement) of animal use
- How animal research is governed in Canada and elsewhere; challenges of governing or evaluating the use of animals in science
- Current welfare topics based on our scientific understanding of the experiences of animals

Students will develop:

- Skills in critical thinking as they reflect on: the strengths and weaknesses of our governance system, how the system might be improved, the ethical debate over our relationship with animals and our scientific understanding of the experience of animals

- An ability to discuss and analyse complex ethical issues

CLASS STRUCTURE AND LEARNING ACTIVITIES

The class is structured to feature frequent guest lectures on a broad range of topics from international leaders in the field of laboratory animal ethics and welfare. Many classes will feature a lecturer who will speak for about half of the class, followed by discussion and the assignment of a follow-up activity focused on the reading and lecture content. There will be weekly readings and affiliated homework to complete throughout the course. This class will not formally grade attendance and participation, but given the course format, students who do not do the readings or attend class will not do well.

My goals are to foster critical thinking and engagement with the material. Most assignments will require identifying and discussing an issue rather than detailed factual recall of materials. There will be no final exam.

A class environment that respects a diversity of experiences and views is fundamental. Reflection and respect for others' points of view is integral to nuanced discussion of ethical issues. Attending the lectures, preparing for each class, and respectfully asking the guest speakers questions will enhance your learning experience.

ASSESSMENTS OF LEARNING

Assignment	Grade Value	Date Due
Homework submissions*	60%	Each week throughout the course
ARRIVE Guidelines Assignment	10%	March 17
Protocol Review Assignment	17%	March 24
Meme assignment	3%	April 5
Case study	10%	April 11

*Your two lowest marks will be dropped and excluded from your overall homework submission grade.

LEARNING MATERIALS

There is no required course textbook, but readings will be assigned throughout the course. This will optimize preparedness for the class topics and to provide students with the confidence to participate in discussion.

Readings are posted as PDFs in Canvas in a module called “Readings.”

Canvas will be used to manage all aspects of the course.

- It is critical that you refer to the class schedule for assigned readings and homework due dates.
- Readings and activities will be posted in Modules.
- Announcements will be sent to remind students of class activities or changes.

RULES FOR ASSIGNMENTS AND GRADING

- Submit electronic copies via Canvas. "Turnitin" will be used for larger assignments (class information will be posted on Canvas)
- **Homework assignments** – These will often consist of a short pre-class component and a longer post-class component. The portion to be done before class MUST be submitted on Canvas by the time class starts. The follow-up reflection questions will be due within 48 hrs after class. There will be no penalties for submitting these late, but I **highly recommend** working on them in the allotted time at the end of class so the material is fresh in your mind and you don't fall behind in the course. All homework assignments **must** be submitted by April 5th to receive a grade. Note that two of the homework assignments will be "dropped" from your grade (i.e. your two lowest homework marks won't count).
- **For other assignments** (ARRIVE Guidelines assignment, Protocol Review assignment, Meme Assignment): If you hand these in past the deadline, you will not get any feedback.
- **If you hand in all of your assignments for the course on time, you will get a bonus mark!**

SUMMARY OF ASSIGNMENTS

Note that complete and detailed instructions will be provided, this is a brief overview only.

- *Homework Assignments*

These will consist of a short pre-lecture component and a longer post-lecture component. Before each lecture, read the assigned materials and answer any associated questions on Canvas before lecture. For days with guest speakers, you may be expected to submit one question you might ask them based on the pre-reading and their speaker bio. These must be submitted prior to the start of class. The post-lecture components will be short written assignments targeting the readings and lecture materials. These will be assigned during the lecture with the aim of reserving some time at the end of each class for students to work on them. The aims of these assignments are to create opportunities for students to engage with the course material regularly throughout the course and to develop independent critical thinking.

- *Protocol Review Assignment*

Imagine that you are a member of an Animal Care Committee at UBC and you have been asked to write a report describing the decision your committee made about a submitted research protocol. In your report, you will be expected to provide examples of how the researchers might implement the 3Rs in their protocol, citing peer-reviewed literature.

- *ARRIVE Guidelines Assignment*

Given an experiment using animals, highlight all areas where elements of the ARRIVE guidelines have not been implemented, provide examples of what should be included, and include commentary on how inclusion of each component relates to the quality or reproducibility of the research and the principle of Reduction.

- *Meme Assignment*

Create a meme based on one of the topics discussed in the course. The meme should demonstrate your ability to take an idea or concept and apply appropriate text and images to communicate the

subject matter. It's okay if your meme is not absolutely hilarious or witty, but it should make sense and accurately reflect the topic. These will be submitted with a short description about how your meme relates to course content.

- *Case study*

In class, we will go over a scenario that incorporates several issues discussed throughout the course. There may be affiliated videos or documents. Students will work together during class time to address the scenario from different perspectives (e.g. a member of the public, a researcher, the animal, an ACC member, etc). The written assignment will be completed independently and will involve identifying the main issues raised in the scenario and offering solutions that are supported with evidence.

UNIVERSITY POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on **the UBC Senate website.**

ACADEMIC INTEGRITY

This course involves written assignments. Before starting the course, make sure you are very clear on what is considered plagiarism at UBC. Everything must be written "from scratch" in your own words. If you want to include text from any source – a paper, the internet, a lecture slide, or another student – the material should appear in quotation marks and the source should be clearly acknowledged. You should not cheat, copy, or mislead others about what is your work. When working with your peers, you are welcome to discuss and share ideas but everything you hand in must be your own unique work. Sometimes plagiarism happens accidentally, for example if someone copies material into their rough notes and then uses the notes in their assignment. To help avoid such problems we stress that you should always write from scratch rather than using copy+paste, and we will request that students use Turnitin for larger assignments. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

A more detailed description of academic integrity, including the University's policies and procedures, may be found in the **Academic Calendar.**

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