
ANSC*4090 - Applied Animal Behaviour and Welfare

Winter 2026 Course Outline

Section: 01

Credits: 0.50

Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

Calendar Description

Students will build upon their basic knowledge of animal behaviour and welfare for in-depth examination of how genetic selection, housing and management practices affect the behaviour, health and well-being of farmed and companion animals. Topics will include effects of domestication and artificial selection on behaviour and health traits, and how early experience affects adaptability, sexual and maternal behaviour. Emphasis is placed on the application of behavioural knowledge to the design of housing and management procedures that promote healthy, productive animals and good welfare.

Prerequisite(s): ANSC*3080, ANSC*3090

Department(s): Department of Animal Biosciences

Course Description

Students will advance knowledge from previous courses and master their understanding of how to use animal behaviour to answer questions and provide solutions about concerns of animal welfare.

We will ask whether animals have 'behavioural needs' and if, how and when natural behaviour may be important for animals (or not) even when they have been domesticated for thousands of generations. We will examine how we use behavioural experiments to gauge animals' affective states which are key to answering questions about their welfare. We will explore how early life experience can have life-long and profound effects on behaviour, health and welfare.

Students will do a deep dive on a specific welfare issue by reviewing the scientific literature (individual annotated bibliography), designing a related experiment with help from gen-AI (individual assignment) and developing an informative video on the topic for the class (group project).

Emphasis is placed on the application of behavioural knowledge to the design of housing and management procedures that promote healthy, productive animals and good welfare.

Lecture Schedule

MonWedFri 12:30pm-1:20pm in MACN*113 (1/5 to 4/21)

Instructor Information

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Learning Resources

Required Resources

Lecture slides, assigned readings, assignment instructions and rubrics for assignments posted on the course website: Course link (Website) (<https://courselink.uoguelph.ca/>)

Course Resources

RECOMMENDED TEXTS (some readings may be required)

The Ethology of Domestic Animals: An Introductory Text 3rd Edition, 2017, Edited by Per Jensen (only 2nd edition is available by e-book in the library).

Animal Welfare 3rd Edition, 2018 Edited by M.C. Appleby, I.A. Olssen, and F. Galindo (e- book is available in the library)

REQUIRED READINGS will be posted in CouseLink

Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

Cost of Textbooks and Learning Resources

All learning resources are available through courselink or the library. There are **no costs** associated with this course.

Textbook / Learning Resource	Required / Recommended	Cost

Course Learning Outcomes

1. Understand and articulate the definition of applied ethology and how it can be a useful tool in managing animals and ensuring their well-being.
2. Demonstrate an understanding of animal welfare issues in relation to the management of animals.
3. Make appropriate connections between applied ethology and animal welfare and discuss the complexities of the topic in a balanced, scientifically supported manner.
4. Apply knowledge of physiology, behaviour, welfare, genetics and nutrition to improve animal wellness and performance .
5. Use appropriate terminology to describe in detail the scientific methods used to study animal behaviour and welfare.
6. Effectively communicate your knowledge and understanding of a given topic in a variety of forms (written, oral, exams, in-class quizzes (not graded), small and large group discussion).
7. Find, assess, and correctly cite primary research (in the form of scientific articles, books, graphic data, etc) for a given topic.
8. Critically analyze scientific articles in the form of a summary review of the main points of the resource, explain how it relates to other cited references and how it integrates into the overall assigned topic.
9. Effectively collaborate in a group setting to accomplish a cohesive presentation on an assigned animal welfare topic.
10. Address the various viewpoints and opinions of group and classmates in a professional and respectful manner.

Schedule of Topics and Assignments

Day	Date:	Topic	Activities	Due
Mon	1/5	Lecture 1- Applied Animal Behaviour and Animal Welfare Science Definitions and applications of applied ethology Definitions and frameworks, animal care and welfare guidelines and assessments	Review course outline and requirements Lecture/discussion	
Wed	1/7	Lecture 2 - Animals' Worlds Sensory perception and capacities of domesticated animals Implications for animal care and welfare	Lecture/discussion Assignment 1- Annotated Bibliography instructions explained	
Fri	1/9	Lecture 3 - Animal's Worlds cont. Sensory perception and capacities of domesticated animals Implications for animal care and welfare	Lecture/discussion	Topics for Assignments 1, 2, and 3 assigned and posted
Mon	1/12	Lecture 4 - Domestication and Genetic Selection Behaviour genetics, domestication and its effects on behavioural traits	Lecture/discussion	
Wed	1/14	Lecture 5- Domestication and Genetic Selection Consequences of genetic selection for traits that humans desire	Lecture/discussion	
Fri	1/16	Lecture 6- Domestication and Genetic Selection Welfare Implications of genetic selection for extreme phenotypes	Lecture/discussion	
Mon	1/19	Lecture 7 - Behavioural Needs Definitions, implications for animal welfare	Lecture/discussion	
Wed	1/21	Lecture 8 - Asking animals I Behavioural methods to explore how animals feel Preference tests, 'consumer' demand, cognitive bias, etc	Lecture/discussion	
Fri	1/23	Lecture 9 - Asking animals II Behavioural methods to explore how animals feel Preference tests, 'consumer' demand, cognitive bias, etc	Lecture/discussion	
Mon	1/26	Lecture 10 - Recognizing and measuring affective states I Pain assessment	Lecture/discussion	
Wed	1/28	Lecture 11 - Recognizing and measuring affective states II Fear and fearfulness	Lecture/discussion	
Fri	1/30	Lecture 12 - Experimental design	Assignment 2- Review instructions and rubric for AI-integrated assignment Lecture/discussion	Assignment 1- Annotated Bibliography due in dropbox at 5pm
Mon	2/2	Lecture 13- Early Life Experience I Pre-natal period Effects on animal well-being	Lecture/discussion	

Wed	2/4	Lecture 14 - Early Life Experience II Pre- and Post-natal period Effects on animal well-being	Lecture/discussion	
Fri	2/6	Lecture 15 - Early Life Experience III Post-natal period Effects on animal well-being	Lecture/discussion	Assignment 2- Gen-AI-integrated assignment due in dropbox at 5PM
Mon	2/9	Lecture 16 - Ingestive Behaviour I Biological/behavioural control of feeding, drinking, sucking	Lecture/discussion	
Wed	2/11	Lecture 17 - Ingestive Behaviour II Does how we feed animals match their behavioural biology? Welfare implications	Lecture/discussion	
Fri	2/13	Mid-Term Exam	Exam to cover Lectures 1-15	Exam to be completed in class on Courselink
Mon	2/16	Winter Break		
Wed	2/18	Winter Break		
Fri	2/20	Winter Break		
Mon	2/23	Group exercise Preparing and managing your group project	Assignment 3- Review instructions and rubric for group video presentations Group work- organize and outline video production	Assignment 3 - Group exercise to be completed in class and handed in at the end of class
Wed	2/25	Lecture 18 - Social behaviour I Housing and Managing Groups	Lecture/discussion	
Fri	2/27	Lecture 19- Social behaviour II How do we determine the spatial needs of animals?	Lecture/discussion	
Mon	3/2	Lecture 20- Maternal and neonatal behaviour I Management of nesting, parturition, maternal bonding Welfare implications	Lecture/discussion	
Wed	3/4	Lecture 21- Maternal and neonatal behaviour II Rearing without mom	Lecture/discussion	
Fri	3/6	Lecture 22- Maternal and neonatal behaviour III Breaking bonds, early weaning	Lecture/discussion	
Mon	3/9	Lecture 23-Human animal Interactions I Recognition of humans Effect of caretaker behaviour on welfare	Lecture/discussion	
Wed	3/11	Lecture 24-Human animal Interactions II From lab to pasture to vet clinic..... Using principles of animal behaviour for stress-free handling	Lecture/discussion	
Fri	3/13	Lecture 25-Abnormal Behaviour	Lecture/discussion	
Mon	3/16	Lecture 26-Sickness Behaviour Identifying and supporting animals that are ill	Lecture/discussion	
Wed	3/18	Lecture 27-Euthanasia and Humane Killing Methods and welfare implications	Lecture/discussion	
Fri	3/20	Group assignment meet-up	Lecture/discussion	
Mon	3/23	Group Videos I	Video show- Groups 1-4	Assignment 3 - Videos for ALL group presentations due today at 9am in dropbox
Wed	3/25	Group Videos II	Video show - Groups 5-8	

Fri	3/27	Group Videos III	Video show - Groups 9-12
Mon	3/30	Group Videos IV	Video show - Groups 13-16
Wed	4/1	Group Videos V	Video show - Groups 17-20
Fri	4/3	Holiday	
Mon	4/6	Semester Wrap-Up and Review	Semester review for the final exam Lecture/discussion

Teaching and Learning Activities

- **Assignment 1- Annotated Bibliography (25%)**

Due: Fri, Jan 30, 2026, 5:00 PM, Submit Online through Dropbox on Courselink

Learning Outcome: 2, 5, 6, 7, 8

Students will be assigned a current Animal Welfare Topic to individually research and submit an Annotated Bibliography. The Annotated Bibliography will consist of 8 properly cited scientific articles followed by a brief summary of each article's main points and connections to their Animal Welfare topic. The assignment will be no longer than 4 pages in length. A detailed rubric will be supplied at the time of assignment.

For this assignment, your instructor will be using Turnitin, integrated with the CourseLink Dropbox tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph. **See policy for late assignments**

- **Assignment 2 - Experimental Design (15%)**

Due: February 6, 2026. 5:00 PM Submit Online through Dropbox on Courselink

Learning Outcomes: 3, 5, 6, 7

Experimental design in applied behaviour and welfare. Co-create and critically assess an experimental design using Generative-Artificial Intelligence tools. The experiment will be related to the same Animal Welfare Topic as the annotated bibliography. This is an individual assignment.

- **Midterm Exam (15%)**

Date: Fri, Feb 13, 2026, In-person

Learning Outcome: 1, 2, 3, 4, 5, 6

The Midterm Exam will be offered **in class** time using the Quiz function on Courselink. Password to enter the exam will be available in class.

It will consist of a variety of question types, including Multiple Choice, Short Answer and Graphic Data Interpretation.

- **Assignment 3 - Animal Welfare Group Video (20%)**

DUE: Mon, March 23, 2026, 9:00 AM. Submit videos (for all groups) Online through Dropbox on Courselink

Learning Outcome: 1,2, 3, 4, 5, 6, 7, 8, 9, 10

Groups of up to 6 students who were each assigned the same Animal Welfare Topic for their Annotated Bibliography will co-create a video to be shown during 1 of 5 in-class presentation days. Videos will be no longer than 7 minutes and will highlight background, current research and solutions regarding the topic. (A detailed rubric will be provided at the time of assignment.)

On Monday, Feb 23, a **graded** in-class planning exercise will be completed by each group and handed in at the end of class. This exercise will comprise 10% of the group video mark.

- **Final Exam (25%)**

Date: Fri, Apr 17, 8:30 - 10:30 AM. In person on Courselink. Password to enter the exam will be available at the time of the exam.

Learning Outcome: 1, 2, 3, 4, 5, 6

The Final Exam will be offered in-class on the Quiz function of Courselink. It will consist of a variety of questions types, including but not limited to, Multiple Choice, Short Answer, Long Answer, and Graphic Data Interpretation. The Final Exam will be cumulative in regards to major themes taught throughout the course, but will emphasize material covered after the Midterm (including group videos).

Assessment Breakdown

Description	Weighting (%)	Due Date
Assignment 1 Annotated Bibliography <ul style="list-style-type: none"> Students will be assigned topics Detailed instructions, rubric and examples are available on Courselink 	25%	Friday, January 30, 2026 5 pm in Dropbox
Mid-term Exam On Courselink during class time <ul style="list-style-type: none"> Will cover Lectures 1-15 and assigned readings 	15%	Friday, February 13, 2026 In person, in class
Assignment 2 AI-integrated experimental design <ul style="list-style-type: none"> Students will be provided a gen-AI prompt Detailed instructions, rubric available on Courselink 	15%	Friday, February 6, 2026 5 pm in Dropbox
Assignment 3 Animal Welfare Group Video <ul style="list-style-type: none"> A group project on the same topic as the Annotated Bibliography but with an emphasis on application and recommendations for welfare Detailed instructions, rubric available on Courselink 	20%	Monday February 23 Graded group planning exercise to be completed in class Monday, March 23, 2026 ALL group videos due in dropbox at 9 am
Final exam On courselink at scheduled time <ul style="list-style-type: none"> Emphasis on Lectures 16-27 + Group videos and assigned readings 	25%	Friday, April 17, 2026 in class on courselink, 8:30-10:30

Final Exam

Date: Apr 17

Time: Fri 8:30am-10:30am

Location: TBA *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

Last Day to Drop Course

The final day to drop Winter 2026 courses without academic penalty is the last day of classes: April 06

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

Course Grading Policies

Grading of Assignments and Exams

Expectations and grading rubrics for both the written and oral assignments will be posted on Courselink in the >Assignments< folder in advance of the due date. Please refer to these when preparing your assignments

Submission of Late Assignments

When you find yourself unable to meet a course deadline because of illness or compassionate reasons, please advise the course instructor (ansc4090@uoguelph.ca) in writing, with your name, id#, and e-mail contact

EXTENSIONS MUST BE ARRANGED AT LEAST 48 HOURS IN ADVANCE OF THE DEADLINE

Unless previous arrangements have been made with the course instructor for an extension, late assignments will be penalized 5% of the earned assignment grade each and every day the assignment is late.

Standard Statements for Undergraduate Courses

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 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 (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

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 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

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.

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 undergraduate students 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 the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

Email 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.

Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

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).

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.

Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

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. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)