

Course Outline Form: Fall 2018

General Information

Course Code: ANSC*4090

Course Title: Applied Animal Behaviour

Course Description:

This course deals with why domesticated and confined animals behave as they do with reference to causation (including neurobiological mechanisms), function, ontogeny and phylogeny. Basic principles are usually illustrated by examples taken from common domesticated and confined species. Emphasis is placed on the application of behavioural knowledge to improve captive environments and animal production systems, as well as to understand behavioural problems like aggression or anxiety. Designing housing, facilities and management procedures to suit the behaviour of the animals in question is also covered.

Credit Weight: 0.5

Academic Department (or campus): Department of Animal Biosciences

Campus: Guelph

Semester Offering: Fall

Class Schedule and Location: Tuesday & Thursday 10:00 am - 11:20 am, Rozanski 102

Instructor Information

Instructor Name: Dr. Teresa Casey-Trott

Instructor Email: tcasey@uoguelph.ca

Office hours: for one hour after each lecture or by appointment

Instructor Name: Dr. Meagan King

Instructor Email: mking08@uoguelph.ca

Office hours: for one hour after each lecture or by appointment

GTA Information – all office hours by appointment

GTA Name: Midian Nascimento Dos Santos

GTA Email: mnascime@uoguelph.ca

GTA Name: Aileen MacLellan

GTA Email: maclella@uoguelph.ca

GTA Name: Aimee Begley

GTA Email: abegley@uoguelph.ca

Course Content

Specific Learning Outcomes:

1. Explain how animal behaviour and putative mental states can be rigorously studied using scientific methods, and how this knowledge can be applied to animals under human care to the benefit of both parties.
2. Apply knowledge of lecture material to different contexts from those expressly presented in class.
3. Integrate the concepts and knowledge taught during lectures with the knowledge based on students' own literature reviews, thus demonstrating deep learning.
4. Utilize new ethological vocabulary appropriately and be able to discriminate between scientifically accurate descriptions of animals' capacities and mere anthropomorphism.
5. Collaborate effectively with others by combining individual knowledge of an area of literature into a fully comprehensive review of a complex behavioural issue. As a group students should also be able to present this information in way that is practically meaningful to a specific animal-user group.
6. Evaluate and explain the relevance of published work in the context of their own research interests/chosen topics and be able to create hypotheses of their own in cases where research data do not exist yet.
7. Effectively and systematically perform a literature search for primary research articles related to their own chosen topics using online databases such as Web of Science.

Lecture Content:

Lect.	Date	Topic
<p>1 Teresa Casey-Trott and Meagan King</p>	<p>Thursday 6th Sept.</p>	<p><u>Introduction, overview, & methods:</u></p> <p>Why study behaviour? Introduction to the course: outline of applications of knowledge of behaviour; the history of ethology; ethology on campus</p> <p>Levels of explanation: Why do animals behave as they do? The causation, function, ontogeny and phylogeny of behaviour: what they are, and how they complement each other; introduction to your assignments</p>
<p>2 Teresa Casey-Trott</p>	<p>Tuesday 11th Sept.</p>	<p>How animal behaviour is studied How do scientists turn the complexity and flow of behaviour into data suitable for objective, quantitative analysis?</p>
<p>3 Meagan King</p>	<p>Thursday 13th Sept.</p>	<p><u>Key concepts:</u></p> <p>I: Motivation What determines whether an animal will do any given behaviour, how long s/he performs it for, and at what rate??</p>
<p>4 Meagan King</p>	<p>Tuesday 18th Sept.</p>	<p>II: Learning How does experience affect behavior via learning? Different types of learning. How learning and motivation inter-relate to determine behaviour.</p>
<p>5 Teresa Casey-Trott</p>	<p>Thursday 20th Sept.</p>	<p>III: Animal consciousness and animal emotions Do animals have emotions and moods? Are they consciously aware? If they do, what roles do these have in the control of behaviour?</p>
<p>6 Teresa Casey-Trott</p>	<p>Tuesday 25th Sept.</p>	<p><u>The machinery of behaviour:</u></p> <p>The brain: the master controller of behaviour How the brain makes the decisions that underlie behaviour, and produces the outputs needed to elicit and control muscle action</p>
<p>7 Teresa Casey-Trott</p>	<p>Thursday 27th Sept.</p>	<p>Senses I: Detecting distant stimuli Sensory and perceptual capacities: the signals processed by the brain (vision, hearing, olfaction, and other senses).</p>

Lect.	Date	Topic
8 Teresa Casey- Trott	Tuesday 2 nd Oct.	Senses II: Detecting near stimuli; Sensory processing by the CNS Touch, taste and the vomeronasal organ; Sensory processing by the mid- and forebrains
9 Teresa Casey- Trott	Thursday 4 th Oct.	Hormones, neurotransmitters and behaviour The effects that hormones & neurotransmitters can have on behavioural systems: e.g. mating, maternal care, foraging and aggression.
	Tuesday 9 th Oct.	<u>No class today (Thanksgiving Break)</u>
10 Meagan King	Thursday 11 th Oct.	<u>Behavioural development:</u> Behavioural development I: Life stages and behaviour -- how and why behaviour patterns change over the course of an animal's life
11 Meagan King	Tuesday 16 th Oct.	Behavioural development II: How early experiences affects later behaviour; e.g. pre-natal stress, imprinting and other effects
12 Meagan King	Thursday 18 th Oct.	<u>Genetics, phylogeny & ultimate function:</u> The evolution of behaviour How and why do behaviors evolve in the wild? Studying the ultimate functions of behaviors.
13 Meagan King	Tuesday 23 rd Oct.	Genetics and phylogeny II: The 'domestication' of behaviour Characteristics of domesticated animals
	Thursday 25 th Oct.	NO CLASS. WORK ON YOUR MID-TERM (take home) posted Oct 23, due Oct 30.
14 Meagan King	Tuesday 30 th Oct.	<u>Three worked examples:</u> Courtship and mating I How and why do animals choose their mates and copulate? Causation and development
15 Meagan King	Thursday 1 st Nov.	Courtship and mating II How and why do animals choose their mates and copulate? Function and evolution/genetics
16 Teresa Casey- Trott	Tuesday 6 th Nov.	Learning abilities I What internal and external factors affect leaning rates and intelligence? And what developmental factors are important?

Lect.	Date	Topic
17 Teresa Casey- Trott	Thursday 8 th Nov.	Learning abilities II What are the functions of being intelligent? What are the functions of learning? How and why has it evolved? How does domestication affect it?
18 Meagan King	Tuesday 13 th Nov.	<u>Applied ethology and animal welfare:</u> Pain and sickness
18 Mariana Roedell	Tuesday 15 th Nov.	<u>Applied ethology and animal welfare:</u> Developmental and stress physiology
19 TBA	Thursday 20 th Nov.	<u>Applied ethology and animal welfare:</u> Guest lecture
21 TBA	Thursday 22 nd Nov.	<u>Applied ethology and animal welfare:</u> Guest lecture
22 TBA	Tuesday 27 th Nov.	<u>Applied ethology and animal welfare:</u> Guest lecture
	Thursday 29 th Nov.	HAND IN HARD COPY OF FINAL PAPER BY 11:20 am

Labs:

None

Seminars:

None

Course Assignments and Tests:

See above for numbered learning outcomes.

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Reflection on Radiolab podcast	September 18 th	5	2, 4
Reflection on TedTalk	September 25 th	5	2, 4
Annotated Bibliography	October 4 th	5	3, 6, 7
Mid-Term Exam	October 30 th	25	2, 4
Poster Presentation	November 5-9 th	15	1, 2, 3, 4, 5
Final Paper	November 29 th	20	2, 3, 4, 6, 7
Final Exam	December 7 th	25	1, 2, 4

Last day of class Nov 29; final paper is due (no lecture that day).

Take home final exam will be posted Friday Nov 30th. To be returned for grading between 10am and noon, Friday Dec 7th (hand in location: lobby of ANNU).

Final exam weighting:

The final exam is worth 25% of the overall grade for the course.

Course Resources

Required Texts:

None

Recommended Texts:

For the fundamentals of ethology, we recommend the following:

Manning, A. & Dawkins, M.S., 1992. (3rd ed or more recent) An Introduction to Animal Behaviour. (Cambridge University Press).

McFarland, D. 1993. Animal Behaviour– Psychobiology, Ethology & Evolution. (Longman)

Alcock, J., 2005. Animal Behaviour: an Evolutionary Approach. (Sinauer)

Bolhuis, J. & Giraldeau, L.–A., 2006. The Behaviour of Animals (Blackwell)

For applied ethology, we recommend:

Broom, D.M. & Fraser, A.F., 2007. Domestic Animal Behaviour and Welfare (4th ed; CABII)

Houpt, K. A. 2004. Domestic Animal Behavior for Veterinarians and Animal Scientists (4th ed; Blackwell)

Fraser, D. 2008. Understanding Animal Welfare: the Science in its Cultural Context (UFAW/Blackwells)

Appleby, M. et al. 2011. Animal Welfare (2nd ed.; CABI)

Mason, G. & Rushen. R. 2006. Stereotypic Behaviour in Captive Animals. (2nd ed. CABI).

Jensen, P. (2009). The Ethology of Domestic Animals: An Introductory Text (CABI)

We also recommend avoiding lay books and websites (i.e. anything written for the general public by people without research experience in the study of animal behaviour).

Lab Manual:

None

Other Resources:

CourseLink will be used to disseminate all course information including: lecture slides prior to class, supplementary readings, grades, and any additional information regarding course content and proceedings (e.g. lecture schedules, due dates, course syllabus, etc.). In addition, message boards will be set up for students to ask questions to their peers and/or course instructor.

Field Trips:

None

Additional Costs:

Students will be responsible for printing one poster per group of four students. These can be printed for around \$30 in the Chemistry Department, the College of Biological Sciences, or the Geography Department. There is also a printing service in the University Center called Click Signs. (Posters can also be hand-made instead).

Course Policies

Grading Policies:

A hard copy of your annotated bibliography is due on October 4th at 10am in the lecture hall. There will be no late submissions accepted for this assignment.

The mid-term exam will be due on October 30th and is take home. It will be posted on October 23, and a hard copy of your answers must be returned by 10am in class on Tuesday, Oct 30. The TAs will grade this exam.

Posters will be due Nov 5 and presented sometime that week. You will schedule a time and location with the TA's to drop off and present your posters. Late posters will not be graded. This is a group assignment and all group members will receive the same grade, and as such should contribute equal work to the project. In the case this does not happen, group members will confidentially weight the contributions of all group members and at the instructor's discretion some group members may receive a reduced grade. Any groups experiencing difficulty are encouraged to contact the instructors as early as possible so the situation can be resolved prior to grading. TAs will grade this assignment.

Final papers will be due on November 29th by the end of class at 11:20 am in the lecture hall. Late papers will be penalized by 10% of the paper grade (2% of the overall course grade) for every two days they are late.

The final exam is a take home exam that will be made available for download on CourseLink on November 30th. The exam is due back between 10:00AM and noon on December 7th to be handed in to the lobby of ANNU. Late exams will not be accepted. The TAs will grade this exam.

Course Policy on Group Work:

The poster assignment is a group assignment that students will complete in groups of 4. Groups will be formed at the start of the semester with each group focusing on an applied ethology 'problem'. Within groups, each student will tackle one of Tinbergen's 'four whys' individually (the focus of their final paper) and then they will combine their knowledge into one comprehensive message (the poster) to be presented to a specific 'target audience'. All group members will receive the same grade for this assignment barring exceptional circumstances or within group conflict (see above for resolution of this issue).

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without the consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

University Policies

Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

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.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

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 the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or visit the [Student Accessibility Services website \(http://www.uoguelph.ca/csd/\)](http://www.uoguelph.ca/csd/).

Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](#) for more information.

Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III \(Schedule of Dates\) of the Undergraduate Calendar](#).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).