



# **ANSC\*6720 Scientific Assessment of Affective States in Animals**

Winter 2023

Section(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - January 05, 2023

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## **1 Course Details**

### **1.1 Calendar Description**

Graduate students will explore the biology and validity of behavioural and physiological techniques used in animal welfare assessment such as: sympathetic activation, HPA functioning, stereotypic behaviour and preference responses. A combination of lecture, instructor-led discussion and student-led discussion will explore these methods of animal welfare assessment.

### **1.2 Course Description**

'The Scientific Assessment of Affective States' is thus a semester-long course for graduate students interested in using behavioural, physiological and other measures to draw objective, defensible conclusions about emotions, moods and affective disorders in non-human animals. It is primarily aimed at animal welfare students, but is relevant to behavioural neuroscience and veterinary students as well.

A mix of formal lectures, class discussions, take-home readings, short answer assignments, essay-writing and group work will enable students to:

Explain the nature and hypothesized biological functions of affective states;

Appreciate the roles that animals' affective states play in different conceptions of animal welfare, and formally articulate and defend personal views of welfare;

Understand the scientific challenges of assessing subjective experiences;

Understand how various indicators of animal affective states have been validated, and their pros and cons for tackling different types of welfare problem/answering different types of research question about affective states, in particular:

measures of conditioned and unconditioned preference/avoidance; abnormal repetitive behaviour such as stereotypies; corticosteroid responses; measures of sympathetic activation; judgment biases (e.g. acoustic startle; cognitive bias); infant and adult mortality

rates.

Have a useful, rigorous set of guidelines for assessing affective states.

### 1.3 Timetable

Timetable is subject to change. Please see WebAdvisor for the latest information.

LEC TUES

02:30pm-05:20pm

ANNU, Room 030

1.	Jan. 10 <sup>th</sup>	Affective states: what are they and why are they interesting to welfare researchers?
2.	Jan. 17 <sup>th</sup>	Validating indicators of affective states: what properties must they have?
3.	Jan. 24 <sup>th</sup>	Validating indicators continued
4.	Jan. 31 <sup>st</sup>	Preference/avoidance as indicators of affective states
5.	Feb. 7 <sup>th</sup>	Acute HPA responses as indicators of affective states
6.	Feb. 14 <sup>th</sup>	<i>Students make small presentations (15%)</i>  <b>(Assignment 1)</b>
		<b>SPRING BREAK</b>
7.	Feb. 28 <sup>th</sup>	Acute SAM responses as indicators of affective states  <b>Assignment 2 - (small papers) (15%)</b>
8.	Mar. 7 <sup>th</sup>	Judgment biases as indicators of affective states
9.	Mar. 14 <sup>th</sup>	Abnormal repetitive / stereotypic behaviour as an indicator of affective states

10.	Mar. 21 <sup>st</sup>	Mortality rates as indicators of affective states
11.	Mar. 28 <sup>th</sup>	<b><i>Final presentations - group 1 (35%)</i></b>
12.	Apr. 4 <sup>th</sup>	<b><i>Final presentations - group 2 (35%)</i></b>

## 1.4 Final Exam

There is no final exam

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## 2 Instructional Support

### 2.1 Instructional Support Team

**Instructor:** Ana Rentsch  
**Email:** arentsch@uoguelph.ca  
**Office:** ANNU 106

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## 3 Learning Resources

Lecture slides and all relevant material will be posted on the Courselink site. No specific textbook is required.

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## 4 Learning Outcomes

### 4.1 Course Learning Outcomes

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

1. • Explain the nature and hypothesized biological functions of affective states;
2. • Appreciate the roles that animals' affective states play in different conceptions of animal welfare and formally articulate and defend personal views of welfare;
3. • Understand the scientific challenges of assessing subjective experiences;

4.

- Understand how various indicators of animal affective states have been validated, and their pros and cons for tackling different types of welfare problems/answering different types of research questions about affective states, in particular:

measures of conditioned and unconditioned preference/avoidance; abnormal repetitive behaviour such as stereotypies; corticosteroid responses; measures of sympathetic activation; judgment biases (e.g. acoustic startle; cognitive bias); infant and adult mortality rates.

5.

- Presenting to a peer audience and answering/asking critical questions about the scientific assessment of animal affective states.

6.

- Have a useful, rigorous set of guidelines for assessing affective states.

## 5 Teaching and Learning Activities

### 5.1 Lecture

**Jan 10**

**Topics:** Affective states: why are they interesting to welfare researchers?

Emotions, moods and cumulative stress

**Jan 17**

**Topics:** Validating indicators of affective states: what properties must they have? Construct validity, sensitivity and specificity

**Jan 24**

**Topics:** Functions and phylogenetic distribution of affective states.

(Who is sentient?)

*And/or*

*Operationalising modular/discrete affective states*

**Jan 31**

**Topics:** Preference/avoidance as indicators of positive and negative emotion

**Feb 7**

**Topics:** Acute HPA responses as indicators of negative emotion

Small papers due (15%)

**Feb 14**

**Topics:** *Students make small presentations (15%)*

**(Assignment 1)**

**Feb 28**

**Topics:** Acute SAM responses as indicators of negative emotion

**Mar 7**

**Topics:** Judgment biases as indicators of positive and negative moods

**Mar 14**

**Topics:** Abnormal repetitive / stereotypic behaviour as an indicator of cumulative stress

**Mar 21**

**Topics:** Mortality rates as indicators of cumulative stress

**Mar 28**

**Topics:** *Practice presentations*

**April 4**

**Topics:** *Final presentations (35%)*

## 6 Assessments

### 6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Small Presentation	15
Small Written Paper	15
Lecture Presentation	35
Major Paper	35
Total	100

### 6.2 Assessment Details

#### **Presentation (Assignment 1) (15%)**

**Due:** Feb 14

**Learning Outcome:** 1, 3, 4, 5

Present on a validated indicator, and its strengths and weaknesses.

Ask min. one question during peer presentations.

Can be redone if under 70%. and final grade will be the average of the two.

#### **Assignment 2 (15%)**

**Date:** Feb 28

**Learning Outcome:** 1, 2, 3, 4

Assignment 2 is a short paper, Present on a validated indicator, and its strengths and weaknesses, using the same indicator from assignment 1. Maximum one page excluding references.

#### **Lecture Presentation (35%)**

**Due:** Mar 28 or Apr 4

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

This will be a group exercise (done in groups of 2-3 depending on topic size; potential topics are listed separately). The product should be an academic lecture, written at a level suitable for the researchers, professors and graduate students of the Animal Behaviour

and Welfare Group. The lecture will be given by the whole group (unless there are special circumstances). Students are also required to attend the presentations by their peers and ask a minimum of one question. The default is that group members will receive the same grade and that this and the final paper are weighted equally. However, this is open to negotiation as long as the sum is 70%.

### **Major Paper (35%)**

**Due:** April 11

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

This is an individual exercise, also worth 35%. I want a scholarly, well-referenced, logical review, no more than 7 pages long (1.5 line spacing, 12 pt font) excluding references and figures, and on the same topic as the final presentation. The final paper should be handed in for grading out of 35% on or by April 10<sup>th</sup>.

The paper and group lecture together are thus worth 70%. The default is that the final presentation and the final paper are weighted equally. However this is open to negotiation as long as the sum of the two is 70%.

## **7 University Statements**

### **7.1 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.

### **7.2 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>

### **7.3 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-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

## 7.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

## 7.5 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>

## 7.6 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>

## 7.7 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.

## 7.8 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>

## 7.9 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.

## 7.10 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).

## **7.11 Covid-19 Safety Protocols**

For information on current safety protocols, follow these links:

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

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

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