



ZOO*4070 Animal Behaviour

Fall 2018

Section(s): C01

Department of Integrative Biology

Credit Weight: 0.50

Version 1.00 - September 04, 2018

1 Course Details

1.1 Calendar Description

This course provides an introduction to the theories and principles of the behaviour of animals. It includes comparative studies of learning, socialization, social interaction, and other components of animal behaviour.

Pre-Requisite(s): BIOL*2400, (STAT*2040 or STAT*2230)

1.2 Course Description

This course will explore the scientific theories and methods used to understand how and why animals behave the way they do. Using a variety of case studies and in-class discussions, we will examine ecological and evolutionary perspectives for the diversity of behaviour in wild animals, as well as the genetic and sensory-motor mechanisms behind the development and maintenance of these behaviours. Class will consist of a mixture of lectures, discussions, demonstrations and audio-visual presentations. Students will be required to take an active role in class and will be responsible for reading scientific literature that accompanies the lecture material. A major component of the course will be an independent small-group project that will involve creating a study, developing hypotheses and predictions, collecting data in the field or lab, and presenting results in a conference-style poster format among peers.

1.3 Timetable

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

Important Dates

Sep 28 Proposal for term project due

Oct 8 No-class – holiday

Oct 19	Mid-term
Nov 2	Course drop deadline (40 th class day)
Nov 26, 28, 30	Poster presentations for term projects + peer evaluations
Dec 10	Final Exam

1.4 Final Exam

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

Dec 10

2 Instructional Support

2.1 Instructor(s)

Ryan Norris PhD

Email: rnorris@uoguelph.ca
Telephone: +1-519-824-4120 x56300
Office: SC1 2451
Office Hours: Mon, Wed 1-3 PM **or** by appointment

2.2 Teaching Assistant(s)

Teaching Assistant: Alex Sutton
Email: asutto01@uoguelph.ca
Office: 2444 SSC
Office Hours: Tues, Thurs 1-3 PM **or** by appointment

3 Learning Resources

3.1 Required Resource(s)

Courselink (Website)

Course website: This course will make use of the University of Guelph's course website on D2L (via Courselink). Consequently, you are responsible for all information posted on the Courselink page for ZOO*4070. Please check it regularly.

3.2 Recommended Resource(s)

Textbooks (Textbook)

Textbook: Lectures will not follow a specific textbook. However, there are several *required readings* from **Sherman, P.W., and J. Alcock. 2013. *Exploring Animal Behavior: Readings from American Scientist (6th edition)* Sinauer Associates, Sunderland, MA.** The reader can be purchased at the bookstore OR individual articles (see list below) can accessed on-line through the UG library. American Scientist is a popular magazine so the articles are written in an accessible manner. The content of the readings will not be covered in detail during the lectures but each reading is connected to a specific lecture topic. In preparation for tests, students are required identify connections between the content of the readings and material covered in class, particularly how the theories discussed in lectures apply to the articles.

Optional study guides: The following textbooks could be consulted as study guides: 1. Alcock, J. 2013. ***Animal Behavior, An Evolutionary Approach.*** Sinauer Associates, Sunderland, MA. (9th or 10th edition). 2. Dugatkin, L.A. 2009. ***Principals of Animal Behavior.*** W.W. Norton & Company. (2nd or 3rd edition). Many of the general concepts and theories covered in class are in these textbooks so you may find them helpful if you need clarification. However, you will find that some specifics covered in the lectures (e.g. examples from different species, mathematical equations) may be missing from one or both of these sources so it is best to not rely on these solely to prepare for tests. Two copies of each textbook will be on reserve in the library.

4 Learning Outcomes

4.1 Course Learning Outcomes

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

1. *understand* and critically *evaluate* major theories in animal behaviour
 2. *apply* the scientific method to study behaviour
 3. *apply* evolutionary theory to understand how and why animals behave the way they do
 4. *asses* and *discriminate* both proximate and ultimate elements of animal behaviour
 5. *create* and *design* an independent study examining a type of behaviour
 6. *collect* and *analyze* behavioural field data
 7. *communicate* science to your peers and to the public
-

5 Teaching and Learning Activities

5.1 Lecture

Topic(s):

REQUIRED readings

Animal

Behavior: Readings

American Scientist"

Week Date Topic

0 **Sept 7** Course intro & project overview

1 **Sept 10** Approaches to studying behaviour I

Sept 12 In-class group projects

Sept 14 Approaches to studying behaviour II **Why male ground sq (pp 38-45)**

2 **Sept 17** Evolution & behaviour I **Evolution for the good (pp 79-89)**

Sept 19 In-class group projects

Sept 21 Evolution & behaviour II

3 **Sept 24** Altruism & inclusive fitness I

Sept 26 In-class group projects

Sept 28 Altruism & inclusive fitness II **Physiology of helping (275-282)**

- 4 **Oct 1** Eusociality I
- Oct 3** In-class group projects
- Oct 5** Eusociality II **Nake mole-rats (pp 1**
- 5 **Oct 8** No class - holiday
- Oct 10** In-class group projects
- Oct 12** Cooperation I
- 6 **Oct 15** Cooperation II **Why ravens share (p**
- Oct 17** In-class group projects
- Oct 19** Mid-term
- 7 **Oct 22** Parental care I
- Oct 24** In-class group projects
- Oct 26** Parental care II **Avian siblicide (pp 1**
- 8 **Oct 29** Habitat use I
- Oct 31** In-class group projects
- Nov 2** Habitat use II
- 9 **Nov 5** Territoriality & Foraging
- Nov 7** In-class group projects
- Nov 9** Poster presentation & statistics
- 10 **Nov 12** Caching & memory

	Nov 14 In-class group projects	
	Nov 16 Anisogamy & sexual selection	The strategies of hum 196-208)
11	Nov 19 Alternative reproductive tactics	Shaping brain sexual
	Nov 21 Sperm Competition	
	Nov 23 Female Choice	Why do bowerbirds k (pp 233-238)
12	Nov 26 Class poster presentations	
	Nov 28 Class poster presentations	
	Nov 30 Class poster presentations	

6 Assessments

6.1 Marking Schemes & Distributions

Form of Assessment	Weight of Assessment	Date(s)	Learning Outcomes Addressed	Course Activity
1. Mid-term	20%	Oct 19	1,2,3,4	Lectures & readings
2. Term project				
Proposal	10%	Sep 28	2,3,4,5	Lectures & outside class time
Poster content & presentation	30%	Nov 26,28,30	2,3,4,5,6,7	Lectures & outside class time
Evaluation by	10%	Nov 30	2,3,4,5,6,7	Lectures & outside class

	group members			time
	Evaluation of another poster	5%	Nov 26,28,30	1,4,7 Lectures
3. Final Exam		25%	Dec 10	1,2,3,4 Lectures & readings

7 Course Statements

7.1 Course Content

Lectures will be composed of case studies, group discussions, and interactive demonstrations designed to engage and familiarize students with the major theories in animal behaviour and the diversity of behaviours found in wild animals. Both the mid-term and final will be primarily short and long answer with a few multiple-choice questions. Both tests will be designed to test your critical thinking skills rather than simply recall basic information, so students will be required to develop a deep understanding of concepts rather than memorize specific types of behaviours. ***The mid-term will cover material presented from the start of class to the end of the Oct 15 and the final will cover material presented from Oct 22 to Nov 23*** (although students will be required to know major concepts presented in the first part of the course).

In addition to a mid-term and a final, students will undertake a term-long project in groups of 5 people. The project provides an authentic, hands-on experience in the scientific study of animal behaviour by requiring students to conduct independent research from start to finish. Students will conceive of and design a study, collect data in the field, analyze and interpret the data, and then present their results to their peers and the public in the form of a poster. This project is designed to evaluate your critical thinking skills, ability to formulate hypotheses and predictions, collect and analyze data, and present results in a professional manner. Full details about the project will be provided in the ***Sept 7 lecture*** (and possibly carry over to the following lecture) and a complete marking rubric and additional information will be posted on the Blackboard course site. Students will also be provided weekly in-class opportunities for consultation with instructors and TAs and a chance to do focused group work. Later in the term, we will discuss details of poster design and presentation.

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 regulations and procedures for [Academic Consideration](#) are detailed in the Undergraduate Calendar.

8.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

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 asked to resubmit work at any time.

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 book their exams at least 7 days in advance, and not later than the 40th Class Day.

More information: www.uoguelph.ca/sas

8.6 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.

The [Academic Misconduct Policy](#) is detailed in the Undergraduate Calendar.

8.7 Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate 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 which apply to undergraduate, graduate and diploma programs.
