

## ANS 6040 Concepts in Applied Ethology – Syllabus Spring 2020

### Course Title

**ANS 6040 Concepts in Applied Ethology (3 credits)**

### Course Instructor

**Emily Miller-Cushon, Ph.D.**

Office: Animal Sciences – Bldg 499, Room 104E

Email: emillerc@ufl.edu

Phone: (352) 448-3748

### Office hours

I have an open-door policy. To make sure I am available, you are welcome to schedule an appointment via email.

### Course Description and Objectives

This course introduces concepts and methods used to conduct research in the field of applied ethology. Course content includes an overview of mechanisms of animal behavior and approaches to measuring and modeling animal behavior. The focus is on developing skills necessary to conduct, analyze, and interpret research in applied ethology.

Upon completion of this course, students will be able to:

- Understand basic concepts in the field of applied ethology through discussion of both classic literature and current topics
- Explain and utilize principles of behavior science methodology, such as approaches to experimental design and methods of collecting behavioral data
- Critically analyze journal articles, provide clearly articulated peer review, and effectively communicate ideas in class discussions
- Apply concepts in applied ethology to interdisciplinary problems such as an animal welfare assessment
- Integrate principles covered in class in the development of a conceptual model for a behavior of interest

### Time and Location

T 8:30 – 11:30 (periods 2 – 4)

Animal Sciences Building (Bldg 459), Room 102

## CLASS STRUCTURE

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**Course Website on Canvas:** Our course website can be found through login to CANVAS (<http://elearning.ufl.edu>). I will use CANVAS as the primary means to contact with you any important announcements. Grades and assignment feedback will also be made available to you. Resources, including the course syllabus, assigned and recommended readings, supplementary references, and lesson material, will be posted in CANVAS. The lesson material (slides presented in class, as well as other related material) will be organized by topic within modules.

If you are not yet familiar with using CANVAS, please look at the Canvas 'Getting Started' Guide: [guides.instructure.com/m/8470](http://guides.instructure.com/m/8470). To make sure you are not missing any announcement, please make sure your CANVAS settings are adjusted as follows:

- Go to your general **Canvas Settings** (upper right corner within CANVAS) > **Notifications** (left menu bar) > **Notification Preferences**: here set to **"ASAP"** for (at least) Announcements.

**Classroom learning:** Many topics in the class will be explored through in-class discussion and activities related to assigned readings. We will both discuss together as a group and have subgroups focus and present on various topics within the context of class discussions. Certain topics will be presented with the aid of PowerPoint slides, images, and short video clips.

### Textbooks and required reading:

No formal textbook is required, but the following is recommended as a useful reference and will be referred to throughout the semester:

Martin, P. and P. Bateson. (2007) *Measuring Behaviour: An Introductory Guide*. 3<sup>rd</sup> Edition. Cambridge University Press.

Key articles, including classic papers and review articles, will be used as a basis for classroom discussion on important topics. Assigned readings will be made available electronically. We will discuss the following readings on dates as follows:

- January 14**    Duncan, I. J. H. 1995. An applied ethologist looks at the question "Why?"  
Applied Animal Behaviour Science. 44:205-217.  
Manning, A., and M. S. Dawkins. 1992. An Introduction to Animal Behaviour,  
4th Ed., Cambridge University Press, UK (Questions about animal  
behaviour, pp. 11-16)
- March 14**    Lehner, P. N. 1996. Handbook of ethological methods, 2nd Ed., Cambridge  
University Press. (A conceptual model of animal behavior, pp. 19-27, 37-  
45)  
Hughes, B. O., and I. J. H. Duncan. 1988. The notion of ethological 'need',  
models of motivation and animal welfare. 1988. Animal Behavior.  
36:1696-1707.

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- March 28** Franks, B. 2019. What do animals want? *Animal Welfare*. 28:1-10.
- Fraser, D. 2009. Assessing animal welfare: Different philosophies, different scientific approaches. *Zoo Biology*. 28:507-518.
- Ede, et al. 2019. Scientific assessment of affective states in dairy cattle. *J. Dairy Sci.* 102:10677-10694.

In addition to the core readings I will assign reading of a number of peer-reviewed journal articles. These will illustrate different examples of behavioral methods that we will explore in class activities and discussion. The following list is a subset of articles that will be read prior to class discussions to serve as an example of what to expect:

- Rioja-Lang, F. C., D. J. Roberts, S. D. Healy, A. B. Lawrence, and M. J. Haskell. 2012. Dairy cows trade-off feed quality with proximity to a dominant individual in Y-maze choice tests. *J. Dairy Sci.* 117:159-164.
- Gaskill, B. N., S. A. Rohr, E. A. Pajor, J. R. Lucas, J. P. Garner. 2009. Some like it hot: Mouse temperature preferences in laboratory housing. *Applied Animal Behavior Science*. 116:279-285.
- Gaillard, C., R. K. Meagher, M. A. G. von Keyserlingk, D. M. Weary. 2014. Social housing improves dairy calves' performance in two cognitive tests. *Plos One*. 9:1-6.
- Bailoo, J. D., E. Murphy, J. A. Varholick, J. Novak, R. Palme, and H. Wurbel. 2018. Evaluation of the effects of space allowance on measures of animal welfare in laboratory mice. *Scientific Reports*. 8:713.
- Neave, H. W., R. R. Daros, J. H. C. Costa, M. A. G. von Keyserlingk, D. M. Weary. 2013. Pain and Pessimism: Dairy calves exhibit negative judgement bias following hot-iron disbudding. *Plos One*. 8:1-6.

In addition to the core readings, this course will require you to read extensively on a behavior topic of your choosing and select journal articles for the assignments and journal discussion described on following pages of this syllabus.

### ASSIGNMENTS AND GRADING

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All activities will be graded according to rubrics posted on CANVAS. The final grade in the course will be assigned based on numeric average, as described below.

#### Marking scheme:

<b>A</b>	93-100%	<b>B+</b>	87-89.9%	<b>C+</b>	77-79.9%	<b>D+</b>	67-69.9%	<b>E</b>	< 60%
<b>A-</b>	90-92.9%	<b>B</b>	83-86.9%	<b>C</b>	73-76.9%	<b>D</b>	63-66.9%		
		<b>B-</b>	80-82.9%	<b>C-</b>	70-72.9%	<b>D-</b>	60-62.9%		

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

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<i>Activity</i>	<i>Percentage of final grade</i>
Assignment 1: Asking questions about behavior <i>Oral presentation on Jan 21 or 28</i> <i>Written report due Feb 4</i>	20%
Assignment 2: Answering questions about behavior <i>Oral presentation on Feb 18 or 25</i> <i>Written report due Mar 10</i>	20%
Assignment 3: Animal welfare case study and journal discussion <i>Journal discussion on Mar 31</i> <i>Written summary due Apr 7</i>	15%
Assignment 4: Modeling a behavioral system <i>Oral presentation on Apr 14 or 21</i> <i>Written summary due Apr 30</i>	35%
Class participation	10%

**Assignments:** There will be four assignments throughout the term. Three assignments will involve both a written paper and an oral presentation, and one assignment will be a student-led journal discussion. These assignments are described in detail in the following pages of this syllabus. Specific instructions for each assignment and the journal discussion will be discussed in detail in class well in advance of the due date, and numeric rubrics will be shared.

**Participation:** The grade for participation will be determined based on 1) completion of peer-review requirements (providing feedback for classmates' literature reviews and oral presentations) and 2) attendance and involvement in class discussions and activities, according to the rubric posted on Canvas. To achieve a good grade for classroom involvement you should plan to come to class familiar with any assigned reading and prepared to discuss your thoughts. Involvement from all students is a critical component to achieving a well-balanced and productive discussion. On presentation days, be attentive to the other speakers and contribute questions. A temporary participation grade will be posted around midsemester to provide preliminary feedback in a timeframe where you are able to improve your grade if desired.

### **Absences, Make-up Work, and Late Assignments**

Please speak with me as soon as possible if you know you will be absent on a presentation day, as we will attempt to reschedule you. Classroom participation is expected and encouraged and regular attendance of lectures is required to obtain a good participation grade.

It is expected that all written assignments will be received on or before the stated deadline. Please note that if you miss an assignment deadline without an approved reason, I will accept the assignment but will deduct 20 % from your grade for every day that the assignment is late.

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

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### CLASS SCHEDULE

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Please note that this schedule is subject to change as we move through the term. Any significant changes will be discussed in class in advance of the lecture.

<b>Week</b>	<b>Date</b>	<b>Lecture material</b>
1	Jan 7	Introduction to animal behavior Why do we study animal behavior?
2	Jan 14	Asking questions about behavior - <i>Activity: student behavior topics</i> - <i>Discussion of assigned reading: Tinbergen's questions</i>
3	Jan 21	<i>Assignment 1 – Student presentations and discussion</i>
4	Jan 28	<i>Assignment 1 – Student presentations and discussion</i>
5	Feb 4	Answering questions about behavior - Measuring behavior, experimental design - <i>Activity: Designing an ethogram</i> <b>Due: Assignment 1 report</b>
6	Feb 11	Answering questions about behavior cont. - Measuring social behavior, designing choice tests - <i>Activity based on reading: Choice test methods</i>
7	Feb 18	<i>Assignment 2 – Student presentations and discussion</i>
8	Feb 25	<i>Assignment 2 – Student presentations and discussion</i>
	Mar 3	<i>Spring break - no class</i>
9	Mar 10	Conceptual models of behavior - <i>Discussion of assigned reading</i> <b>Due: Assignment 2 report</b>
10	Mar 17	Learning and cognition
11	Mar 24	Behavior and animal welfare - <i>Discussion of assigned reading: Assessing affective state</i>
12	Mar 31	<b>Assignment 3 journal discussion: Current topics and methods in animal welfare science</b>
13	Apr 7	Ethics in research - Topics: peer review process, animal use in research - <i>In-class activity: Peer review</i> <b>Due: Assignment 3 written summary</b>
14	Apr 14	<i>Assignment 4 – Student presentations and discussion</i>
15	Apr 21	<i>Assignment 4 – Student presentations and discussion</i>

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## **OTHER IMPORTANT INFORMATION**

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### **Academic Honesty**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

### **Software Use**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

### **Campus Helping Resources**

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu](http://www.counseling.ufl.edu)
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Wellness Coaching

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- U Matter We Care, [www.umatter.ufl.edu/](http://www.umatter.ufl.edu/)
- Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>

### Student Complaints:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>

### Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

### Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.