

Biosci 23250: Research in Animal Behavior

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Office hours:
Fridays, 1:00-3:00 PM, Culver 402
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(or by appointment)

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Office hours:
BPSB (940 E. 57th St.), Room 126
Wednesdays, 10:00 AM-12:00 PM
Thursdays, 1:00-3:00 PM
(or by appointment)

Textbook: *Measuring Behaviour, second edition*. Martin and Bateson, 1993. Available in the University of Chicago Bookstore (strongly recommended).

Course overview:

Research in animal behavior offers an opportunity to conduct independent research projects in animal behavior. You'll develop a research question, devise a research methodology, collect and analyze data, interpret and write up your results, and present your findings to your peers.

Course logistics:

The class will meet Tuesday and Thursday mornings at Lincoln Park Zoo. Transportation will be provided. Students should meet the TA and bus in front of Regenstein Library (1100 E 57th St) at 9:00 AM. Please be on time; the bus will not wait. If you need to miss a class, be sure to contact the TA in advance. The bus will leave the zoo at noon to return to campus.

Upon arrival at the zoo, we will have a brief classroom session to discuss logistics and expectations for the day. These meetings will take place in the Conference Room of the Regenstein Center for African Apes. Note: this area is not open to the public, so you will need to be with the TA or instructor in order to gain access. We will spend some time during the first zoo session touring the zoo and discussing possible projects. You are expected to conduct individual projects, however with permission, you may work with a partner. Although you are free to select any species for your research, we will discuss some potential projects that are of particular interest to the zoo. By the third week of the quarter, all students should have their research projects planned and begin collecting data. You will work independently from 10:00 to 11:45, and the instructor and TA will "circulate" to address any problems or concerns.

Through the eighth or ninth week of the quarter, you will be collecting data. You are expected to collect a minimum of 25 hours of data. This will likely require you to make one or more additional trips to the zoo on your own. Please contact the instructor if you need transportation. Although you will be working independently, you are expected to attend all class sessions.

Assignments:

In order to facilitate your preparation of the final project, you will be responsible for turning in progress reports and sections of your final paper throughout the quarter. These assignments will be due on Thursdays. They will be returned to you with comments the following Tuesday. The

assignments are described on the syllabus, and can be discussed as needed during our Tuesday sessions, discussion sessions, or office hours.

Readings:

Throughout the quarter, we will read articles from the primary literature and discuss these briefly during our morning meetings. Please be prepared to express your opinions about the readings. All articles will be available via the class' Chalk website. To access the site, go to chalk.uchicago.edu and type in your username and password (same as your CNetID and Password for CMail). Under "My Courses", click on the title for this class. The articles can be found by selecting "Course Documents".

Final projects:

During the final week of class, you will present your findings orally to classmates and interested zoo staff. Seniors' papers will be due at this time. For all other students, your final, written paper will be due no later than noon on June 6 (the scheduled final exam period).

SYLLABUS, BIOSCI 23250, RESEARCH IN ANIMAL BEHAVIOR

WEEK	CLASS ACTIVITY	ASSIGNMENT
1 (March 28, 30)	Observational methods (Tu)* Zoo tour (Th)	Read Altmann, 1974 *Tuesday, March 28, class meets on campus in BSLC 216.
2 (April 4, 6)	Preliminary observations	Turn in 1 paragraph regarding what you expect to study. What species? What research question? Animal ID? Proposed methods
3 (April 11, 13)	Data collection	Read Hosey; Stoinski Turn in annotated bibliography Turn in proposed data sheet
4 (April 18, 20)	Data collection	Turn in methodology [additional discussion session: data entry and tabulation]
5 (April 25, 27)	Data collection	Read Sutherland, Caro Turn in draft of introduction and revisions of methodology
6 (May 2, 4)	Data collection	Schedule appointment with TA or instructor
7 (May 9, 11)	Data collection	Read Swaisgood and Shepherdson, and Kuhar. Turn in analysis plan and bibliography
8 (May 16, 18)	Data collection	Turn in any revisions as needed [additional discussion session: basic statistics and data summary]
9 (May 23, 25)	Data collection/ analysis	Schedule appointment Turn in summary of results if you haven't yet done so [May 25: meet on campus, BSLC 018]
10 (May 30)	final presentations	Laflin Multi-Purpose Room, Lincoln Park Zoo Administration Building

ASSIGNMENT OVERVIEW

Week 1 (March 28, 30) *Methods introduction*

March 28: Observation methods: rationale for sampling methods; advantages and disadvantages of different methods; ethogram construction. Introduction to Lincoln Park Zoo and possible projects.

March 30: Tour of Lincoln Park Zoo.

Assignment:

1. Read Altmann, 1974

Week 2 (April 4, 6) *Reconnaissance observations and data collection practice*

Based on your visit to the zoo last week, select the group of animals that you will observe for your study. List the individual animals in the group; describe them, including characteristics that you will use to help you identify individuals.

April 4: Begin an informal, ad-lib observation sheet. Always include your name, the date, and the time the observation session starts and ends. Describe the behaviors that you observe; keep track of the time that a particular behavior occurs.

April 6: Plan to begin preliminary data collection today. Use the time to practice, refine observation methods and/or research questions, confirm animal id, etc.

Assignment due April 6:

1. Turn in your description of the animals you plan to observe. Describe their exhibit.
2. Based on your preliminary observations, prepare a single paragraph description of what is of interest to you in this species and this setting, and a tentative plan of action to investigate that topic at the zoo. What is the basic question that you hope to answer?
3. Go through your observation record. Define the behaviors that you will ultimately include in your ethogram in an objective, clear manner. Based on your ad lib data, what observation method do you expect to use? Why?

Week 3 (April 11, 13): *Literature review and data collection*

Continue to refine your data collection plans as needed. Begin a literature review on your species. Use the primary literature as much as possible.

Reading: Hosey and Stoinski articles. Discussion of zoo-based research.

Assignment due April 13:

1. Turn in an annotated bibliography on your species/topic. Include at least 4 references.
2. Based on your observations and literature review, prepare an ethogram for your study. Be sure to clearly define all behaviors. You may want to check the following websites for existing behavioral information: www.ethograms.org; www.tolweb.org
3. Turn in your proposed data sheet and a short description of how you intend to collect your data.

Week 4 (April 18, 20): *Data collection*

Weeks 4-9 will encompass your data collection period. Any additional trips to the zoo should be made during this time. You are responsible for collecting a minimum of 25 hours of data.

Assignment due April 20:

1. Continue to expand on your literature review. Add useful articles to your bibliography.
2. Refine and finalize your ethogram.
3. Draft the methods section of your paper. Include a sketch or photo of the exhibit, as well as photos, sketches, or descriptions of the individual animals, a data sheet, and details of your data collection protocol.

Week 5 (April 25, 27): *Data collection*

Reading: Read Caro and Sutherland articles. Discussion on behavior and conservation.

Assignment due April 27:

1. Turn in a draft of the introduction section of your paper. Include a refined statement of your research question.
2. Turn in a revised Methods section

Week 6 (May 2, 4): *Data collection*

There is no written assignment due this week. You must schedule an appointment to meet with the instructor or the TA (or both) to discuss your progress and plans for data analysis. You are free to turn in revisions of previous assignments if you wish. See syllabus for readings.

Reading: “newspaper clipping potpourri” (to be discussed in class). Articles will be available on Tuesday, discussion on Thursday.

Week 7 (May 9, 11): *Data collection*

Readings: Swaisgood and Shepherdson; Margulis et al (discussion of enrichment)

Assignment due May 11:

1. Turn in an outline for your data analysis plan. What variables will you analyze? What relationships or comparisons will you make? What statistical analyses do you anticipate performing?
2. Turn in a final bibliography. This does not need to be annotated.

Week 8 (May 16, 18): *Data collection*

You may turn in revisions on any assignments to date if you wish.

Week 9 (May 23, 25): *Data collection/analysis*

Schedule an appointment to meet with the instructor and/or TA this week. I will be available Tuesday during class hours (at the zoo) or by appointment. We will meet on campus on the 25th. If you have not done so already, turn in a summary of your analytical results.

Week 10 *Final presentation* (May 30, 9:30-12:30, at Lincoln Park Zoo)

All students will present an oral summary of their research projects. These presentations should be no longer than 15 minutes, including questions. If you wish, you may use Powerpoint or overhead transparencies. For graduating seniors, your final paper is due at this time; other students must turn in their papers no later than the scheduled final exam period.