

Animal Behavior Syllabus

Spring 2017

Meets: MWF 12:55pm-1:45pm KIMP 305 Lab: guided independent research project

Instructor: Erica Westerman

Office: SCEN 416

Office hours: Tues 9:30-11am, Wed 2-3:30pm

Course Goals: Students will learn the basic principles of animal behavior, including an introduction to the theory underlying such concepts as optimal foraging, cooperation, and honest signaling. Students will learn how to conduct animal behavior research, enhance their ability to critically read scientific literature, and improve their written and spoken communication skills.

Main Forms of Assessment: 2 midterm exams (20% each), 1 cumulative final exam (20%). Oral presentation of independent research project (rough draft presentation, final presentation, participation during question portions of research symposium) (20%). Written report of independent research project (topic selection, justification/experimental design, ethogram, preliminary results, rough draft, final draft) (20%).

Text: Animal Behavior: An Evolutionary Approach 9th Edition by John Alcock

General Course Format: MW lectures, F discussion/lab

Schedule

Week 1 (1/18-1/20): **W** Behaviors as traits/role in evolution **F** Overview of syllabus, expectations, requirements / What do we mean when we say Animal Behavior?

Reading: J.A. Chapter 1

Week 2 (1/23-1/27): **MW** Proximate and ultimate causes of behavior **F** Studying behavior

Reading: J.A. Chapter 2

Week 3 (1/30-2/3): **MW** Development of behavior **F** experimental design

Reading: J.A. Chapter 3

Week 4 (2/6-2/11): **MW** Neural mechanisms of behavior **F** science, collaborative work, pick team

Reading: J.A. Chapter 4

Week 5 (2/13-2/17): **MW** Hormones, Hormones during mate selection **F** mini-experiment (Saturday review session)

Reading: J.A. Chapter 5

Week 6 (2/20-2/24): **M** Exam **W** Adaptation **F** methods, transferrable?

Reading: J.A. Chapter 6

Week 7 (2/27-3/3): **MW** Foraging **F** paper discussion, rough draft of project plan due
Reading: J.A. Chapter 7

Week 8 (3/6-3/10): **MW** Habitat Selection **F** discussions of methods, experimental design
Reading: J.A. Chapter 8

Week 9 (3/13-3/17): **MW** Communication **F** present methods, constructive criticism
Reading: J.A. Chapter 9

Spring Break (3/20-3/24)

Week 10 (3/27-3/31): **MW** Reproduction **F** experimental design due, start ethogram
Reading: J.A. Chapter 10

Week 11 (4/3-4/7): **M** Exam, **W** Mating systems **F** analyzing behavioral data
Reading: J.A. Chapter 11

Week 12 (4/10-4/14): **MW** Parental Care, social behavior **F** interpreting behavioral data,
prepare for next week
Reading: J.A. Chapter

Week 13 (4/17-4/21): **M** Cooperation, **W** Behavioral Plasticity **F** behavior in different
environments (independent)
Reading: Papers-

Week 14 (4/24-4/28): **M** Environmental Effects, **W** Behavioral Genetics **F** Project/papers
due/group data comparison, analysis
Reading: Papers-

Week 15 (5/1-5/5): Project Presentations

Final Exam Week (5/8-5/12) Cumulative exam