

The study of behavior encompasses all the movements and sensations by which animals mediate their relationship with their external environment -- physical, biotic, and social. No scientific field is more complex, and none is more central to human problems and aspirations.

W.D. ALEXANDER 1975

Course Objectives

As Niko Tinbergen, one of the founders of modern ethology and Nobel Laureate, pointed out: If you ask why an animal behaves in a particular way, you could be seeking one of four different kinds of answer. You could be asking about the evolutionary history of the behavior: Why did it evolve the way it did? You could be asking about its current function: Through which of its consequences does natural selection act to keep it as it is? Thirdly, you might be interested in the stimuli and mechanisms that lead to the behavior being performed: What causes it? Finally, you might ask about the behavior's development: How does the behavior come to be expressed as it does during the life of the individual animal? A complete understanding of behavior involves investigation of all four questions. This course focuses on the latter two ("how") questions, and Behavioral Ecology (BSC 442/542) stresses the former two ("why") questions.

Instructors

Frank Moore
Professor, Biological Sciences

JST 720 and 813
Office hrs: By Appointment

Textbook

Alcock, J. Animal Behavior. Sinauer. Most recent edition.

Evaluation

You will be assigned a letter grade based on the number of points gained relative to others enrolled in the course. Because the laboratory (455L/555L) phase and lecture (455/555) phase of the course are tightly integrated, students earn a single grade for both lecture and laboratory credit. Two lecture exams account for 60% of your grade. Laboratory reports and performance account for the remaining 40% (see Laboratory Syllabus).

100 - 90 = A 79 - 65 = C 49 - = F
89 - 80 = B 64 - 50 = D

Time and Location

Students with Disabilities

If a student has a disability that qualifies under the American with Disabilities Act and requests accommodations, he/she should contact the office of Support Services for information on the appropriate policies and procedures. USM Box 8586, 266-5024.

Drop Policy

The last day to drop this course without academic penalty is October XX. A request to drop beyond that date must be based on legitimate, extenuating circumstances.

DATE	TOPIC	READING
	INTRODUCTION	Alcock CH 1 & 2
	Natural Selection How and Why Questions	
	BEHAVIORAL GENETICS	Alcock CH 3
phenotypic & Genetic Differences	How genes exert their effects Heritability	
	QUIZ ONE	
	BEHAVIORAL DEVELOPMENT	Alcock CH 2 & 4
	Nature/Nurture Controversy Experience and Early Development Learning	
	NEURAL MECHANISMS	Alcock CH 5
	An Animal's <i>Umwelt</i> Effective Stimuli	
	FIRST EXAMINATION	
	NEURAL MECHANISMS [continued]	
	Sensory Capability Control of Motor Output	
	SPATIAL ORIENTATION	Alcock CH 5
	Maps and Compasses	
	TEMPORAL ORIENTATION	Alcock CH 6
	Biological Clocks Circadian Rhythms Circannual Rhythms	
	QUIZ TWO	
	BEHAVIORAL ENDOCRINOLOGY	Alcock CH 6
	MOTIVATION	Alcock CH 6
	Intervening Variables Motivational Models Decision Making	
	COGNITIVE ETHOLOGY	
	EXAMINATION TWO [FINAL EXAM WEEK]	