

Tim Tricas, Dept of Zoology

This course reviews theory and empirical studies on the mechanisms and evolution of animal behavior. We will explore proximate causal mechanisms such as signals and perception, behavioral genetics, and orientation/migration. We address several topics in behavioral ecology such as design of signals, the coevolution of predator and prey, resource optimization, sexual selection and the selfish gene. The class will also discuss recent papers from the primary literature on the lecture topics.

The laboratory portion of this course (ZOOL 606L) is optional and involves independent projects that use hypothesis testing & the scientific method to study questions in animal behavior.

Course Texts: Krebs & Davies. 1993. An introduction to behavioural ecology, 3rd edition, available in the bookstore. In addition, you will be given chapters from a now out of print text by Halliday & Slater 1993. Animal behaviour: Causes and effects; and selected readings from Young 1989. Nerve cells and animal behavior; Goodenough et al. 1991. Perspectives on animal behavior. Supplemental readings from the primary literature will also be provided. Lectures are WF 8.30 – 9.20 in Edmondson 254.

Date	Lecture Topic	Chapter
Aug	24 Animal Behavior, Ethology and Evolution	K&D 1
	26 "	
	31 Signals, Cues and Perception	H&S 1; Y 1,2
Sept	2 "	
	7 Integration and Motor Processes	H&S 2,3
	9 "	
	14 Motivation	H&S 4,5,6
	16 "	
	21 Genes and Behavior	G 3
	23 "	
	28 Orientation / Migration	G 10
	30 "	
Oct	5 Design of Signals	K&D 14
	7 " , Handout midterm exam	
	12 Behavioral Ecology, Midterm exam due	K&D 2
	14 "	
	19 Decision Making	K&D 3
	21 "	
	26 Predators and Prey	K&D 4
	28 "	
Nov	2 Resource Optimization	K&D 5, 6
	4 "	
	9 Fighting and Assessment	K&D 7
	11 "	
	16 Sexual Selection and Conflict	K&D 8
	18 "	
	23 Mating Systems & Parental Care	K&D 9, 10
	25 Instructional Holiday	
	30 Mating Systems & Parental Care (continued)	
Dec	2 Selfish Genes	K&D 11-13
	7 " , Handout final exam	
	12 Final Exam Due (12 pm)	

Principles of Animal Behavior Lab (ZOOL 606L)

Date	Lab Topic
Aug	24 Orientation and discussion of research projects
	31 Informal presentation of research hypothesis
Sept	7 Formal presentation of research project
Nov	23 Review of projects
Dec	7 Final presentation of research projects
	9 Final lab report due (4.30 pm)