

Tim Tricas, Dept of Biology

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. 2012. An introduction to behavioural ecology, 4th edition, available in the bookstore or online. 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 408.

Date	Lecture Topic	Chapter
Aug	22 Animal Behavior, Ethology and Evolution	K&D 1
	24 "	
	29 Signals, Cues and Perception	H&S 1; Y 1,2
	31 "	
Sept	5 Integration and Motor Processes	H&S 2,3
	7 "	
	12 Motivation	H&S 4,5,6
	14 "	
	19 Genes and Behavior	G 3
	21 "	
	26 Orientation / Migration	G 10
	28 "	
Oct	3 Communication and Signals	K&D 14
	5 " , Handout midterm exam	
	10 Behavioral Ecology, Midterm exam due	K&D 2
	12 "	
	17 Decision Making	K&D 3
	19 "	
	24 Predators and Prey	K&D 4
	26 "	
	31 Competing for Resources	K&D 5
Nov	2 "	
	7 Fighting and Assessment	
	9 "	
	14 Territory Economics	
	16 Sexual Selection and Conflict	K&D 7
	21 "	
	22 Non-instructional Day	
	28 Mating Systems	K&D 8, 9
	30 Selfish Genes	K&D 11,12
Dec	5 Living in Groups, Handout final exam	K&D 6
	14 (Monday) Final Exam Due (12 pm)	

Principles of Animal Behavior Lab (ZOOL 606L)

Date	Lab Topic
Aug	22 Orientation and discussion of research projects
Sept	7 Informal presentation of research hypothesis
	14 Formal presentation of research project
	19 Turn in research proposal
Nov	16 Review of projects
Dec	5 Presentation of research projects
	13 (Tuesday) Final lab report due (4.30 pm)