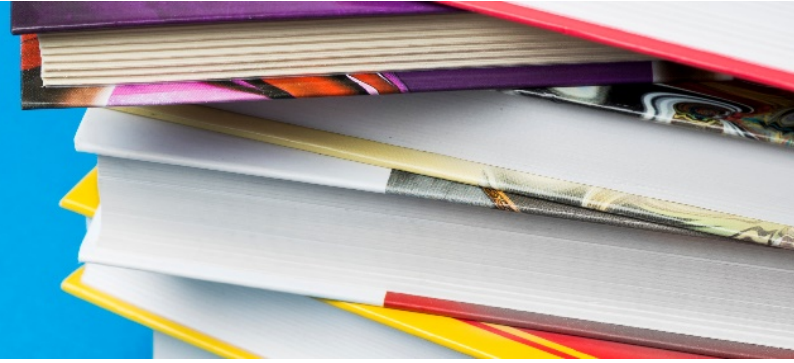




Full Syllabus



Course Title	
Behavioral Ecology 0431-3380	
Lecturer	
Dr. Noa Truskanov; Dr. Orr Spiegel	
Semester	
B - Spring	
Course requirements	
We recommend that students have background in evolution (e.g. took the Evolution course) and in ecology (e.g. Biology Gimel 103) but these are not mandatory requirements (i.e. there are no "DRISHOT KDAM"), and for student with lack of suitable background we can provide relevant reading materials before hand.	
Final grade components	
Final exam	
Course schedule	
Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
Week 1	The adaptive value of behavior, the history of Sociobiology, proximate mechanisms shaping behaviors and their genetic basis. (Noa T 1)
Week 2	Hypothesis testing and research approaches. The comparative, observational and experimental approaches (Noa T 2)
Week 3	Models of optimality, optimal foraging, prey selection, predation risk, maximization currencies, paradoxes in empirical findings and mechanistic constraints on decision making. (Noa T 3)
Week 4	Game theory and Evolutionary stable strategies, the ideal free distribution model, polymorphism ESS (e.g. Hawk and dove). (Noa T 4)
Week 56	Evolution of cooperation: helping and altruism, cooperation and mutualisms (Noa T 5)
Week 6	Evolutionary arm races, predator-prey, brood parasites, mimicry (Noa T 6)
Week 7	Communication and signaling, costs and honesty in signaling and communication, the handicap principle, Social learning and information (Noa T 7)
Week 8	Social behavior and group living- benefits of living in a group, predator avoidance and foraging benefits, information sharing, thermoregulation, mechanisms for group decision making. the tragedy of the commons (Orr 1)
Week 9	Sex allocation - changes along the life trajectory, sex-dependent reproductive investment and deviations from balance populations, environmental effect on sex allocation (Orr 2)



Full Syllabus



Week 10	Sexual selection I- the ultimate value in sex, conflicts among sexes, male (&sperm) competition, infanticide female choice, nuptial gift, the 'good genes' hypothesis, signaling and male signal evolution, assortative mating (Orr 3)
Week 11	Conflicts within a family: parent offspring conflict, male-female parental care conflict, sibling rivalry and begging (Orr 4)
Week 12	Mating systems, monogamy, leks, cooperative breeding, operational sex ratio (Orr 5)
Week 13	Animal personality and individual variation, behavioral syndromes, coping styles, hierarchal levels of personality and applications to conservation (Orr 6)
Required course reading	
Davies, N.B. Krebs, J.R. & West S.A. An Introduction to Behavioural Ecology, 4th Edition, (2012)	
Optional course reading	
Comments	