ZOOLOGY 313 – Animal Behavior  
Syllabus, Fall 2008  
Tuesday and Thursday, 8:30-9:50am, G008 Holden Hall

Instructor  
Dr. Michele A. Johnson  
Department of Zoology  
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Lab phone: 432-5113  
Email: micheleajohnson@gmail.com (preferred)  
Office hours: Tuesday and Wednesday 1:30-2:30pm or by appointment

Graduate teaching assistant  
Katy Califf  
Department of Zoology  
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Office hours: Thursday 10:30-11:30am

Undergraduate assistant  
Srikruthi (Sri) Kakulavarapu  
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Office hours: Monday 5:30-6:30pm

Course objectives  
In this class, you will develop an understanding of the mechanisms and evolution of animal behavior. The topics we will explore include the history of the scientific study of behavior; tools and approaches used to study behavior; the neural, hormonal, developmental, and genetic mechanisms that influence behavior; and ways in which animals survive, obtain resources, and reproduce. Through learning about animal behavior, the general goal of this class is for you to learn to read and think as a scientist.

Required text  

Additional required readings will be available on the course ANGEL site.

Grading  
Your overall grade for this course will be based upon your performance on in-class exercises, 3 exams (2 midterms and a final) and 3 quizzes. Four pop quizzes will be given but you may throw out the lowest grade received on any of the 4 quizzes, including a zero point score for one (and only one) quiz you missed altogether. There will not be opportunities for extra credit in this course. Make-up exams will be provided in extreme (and documented) circumstances only.

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<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>First Exam</td>
<td>100</td>
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<tr>
<td>Second Exam</td>
<td>100</td>
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<tr>
<td>Final Exam</td>
<td>150</td>
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<td>Quizzes</td>
<td>60</td>
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<td>In-class Exercises</td>
<td>90</td>
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<td><strong>Total</strong></td>
<td><strong>500 points</strong></td>
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4.0 = 90%, 3.5 = 85%, 3.0 = 80%, 2.5 = 75%, 2.0 = 70%, 1.5 = 65%, 1.0 = 60%

In the event that you find a problem with a numerical grade assigned to you for a particular quiz or test, direct initial inquiries about this in writing to the graduate TA, Katy Califf.
In-class exercises
During most class periods, I will assign an in-class exercise that is to be completed during the class period. You may choose to work on these exercises by yourself or with a partner. If you work with a partner, you may turn in one copy of your work with both of your names clearly written at the top of the page. If you wish to work with a particular partner, you should find seats beside one another before class begins. Numerical grades will be given to these assignments and posted by MSU ID # on the course ANGEL site. You may look at your graded assignments only by making an appointment with the instructor or one of the TAs.

Class attendance
I expect that you will attend class. Assigned readings are intended to supplement and clarify material presented in lectures, not to substitute for material presented in lectures, nor to replace your attendance at lectures. I apologize that this class meets early in the morning, but this was beyond my control. If for any reason you must miss a lecture, I expect you to notify me before the class and to make other arrangements to obtain class notes from that lecture.

Academic honesty
Article 2.3.3 of the MSU Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the Department of Zoology adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations.

Accommodations for students with disabilities
Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a disability specialist, call 353-9642 (voice), 355-1293 (TTY), or visit MyProfile.rcpd.msu.edu.

Lecture topics and assigned readings

Unit 1 – The study of animal behavior

Tu, Aug 26: Course introduction; History of the study of animal behavior
  • Alcock Chapter 1
  • Snowdon article on the significance of understanding animal behavior, available online at http://www.animalbehavior.org/ABS/Education/valueofanimalbehavior.html

Th, Aug 28: Nature vs. nurture debate; Levels of analysis of animal behavior
  • Alcock Chapter 2 (optional)

Tu, Sept 2: Tools and methods for the study of behavior
  • Reading Primary Literature in Biology by Christopher Gillen, Department of Biology, Kenyon College. Available online at http://biology.kenyon.edu/Bio_InfoLit/index.html.

Unit 2 – The mechanisms of behavior

Th, Sept 4: The development of behavior
  • Alcock Chapter 3
Tu, Sept 9: Behavior genetics – guest lecture by Dr. Dwayne Hamson, MSU.
• Alcock Chapter 3

Th, Sept 11: Neural mechanisms of behavior
• Alcock Chapter 4

Tu, Sept 16: Endocrine mechanisms of behavior
• Alcock Chapter 5, pp. 143-148; 160-172

Th, Sept 18: Biological rhythms
• Alcock Chapter 5, pp. 148-160

Tu, Sept 23: Sensory perception

Th, Sept 25: HOT TOPIC: Animal welfare

Tu, Sept 30: Exam 1 (will cover Units 1 and 2)

Unit 3 – How animals survive and obtain resources

Th, Oct 2: The adaptationist approach
• Alcock Chapter 6

Tu, Oct 7: Antipredator behavior
• Alcock Chapter 6

Th, Oct 9: Foraging and feeding behavior
• Alcock Chapter 7

Tu, Oct 14: Resource partitioning and territoriality
• Alcock Chapter 8, pp. 264-272

Th, Oct 16: Orientation, migration, and navigation
• Alcock Chapter 8, pp. 241-263

Tu, Oct 21: Animal communication 1- how animals communicate
• Alcock Chapter 9

Th, Oct 23: Animal communication 2 – messages sent during communication – Katy Califf
• Alcock Chapter 9
Tu, Oct 28: HOT TOPIC: Conservation and animal behavior

Th, Oct 30: Exam 2 (will cover Unit 3)

Unit 4 – The evolution of reproductive behavior

Tu, Nov 4: Why sex? The evolution of sex and reproductive behavior
• Alcock Chapter 10, pp. 317-328

Th, Nov 6: Sexual selection – male-male competition and female choice
• Alcock Chapter 10, pp. 329-365

Tu, Nov 11: Mating systems
• Alcock Chapter 11

Th, Nov 13: Parental care
• Alcock Chapter 12

Tu, Nov 18: Parent-offspring conflict and sibling rivalry

Th, Nov 20: Social behavior and kin selection
• Alcock Chapter 13

Tu, Nov 25: Cooperation and eusociality
• Alcock Chapter 13

Th, Nov 27: Happy Thanksgiving! No class.

Tu, Dec 2: HOT TOPIC: Human behavior and sociobiology
• Alcock Chapter 14

Th, Dec 4: Semester review and catch-up day, and, time permitting, "bizarre animal behaviors."

Monday, Dec 8, 7:45-9:45am: Final exam (70% will cover Unit 4; 30% will be cumulative)

NOTE: This syllabus is subject to change as needed. If and when changes occur, announcements will be made in class and on the course ANGEL site.