

BIBB 233  
 Neurobiology of Behavior  
 Fall 2013  
 Tuesday/Thursday 1:30-3:00

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 Office Hours: by appointment

Date	Lecture	Readings
<b>I FOUNDATIONS</b>		
Aug 8/29	Introduction to Neurobiology of Behavior	Ch. 1
Sept 9/3	Evolutionary and Comparative approaches to Behavior and the Nervous System	
<b>II SENSORY PROCESSING</b>		
9/5	Introduction to Auditory Processing	
9/10	Echolocation in Bats: Behavior	Ch. 2 pp 35-47
9/12	Echolocation in Bats: Neural Mechanisms	Ch. 2 pp 48-58
9/17	Sound Localization in Barn Owls	Ch. 3 pp 61-70
9/19	<ul style="list-style-type: none"> <li>• Dr. Marc Schmidt, Department of Biology</li> </ul> Sound Localization in Barn Owls	Ch. 3 pp 70-81
9/24	Introduction to Visual Processing	Ch. 3 pp 81-92
9/26	Feature analysis in Toads	Ch. 4
Oct 10/1	Feature analysis in Toads	Ch. 4
10/3	Jamming Avoidance Response in weakly electric fish: Behavior	
10/8	<b>EXAM I</b>	
10/10	<b>FALL BREAK</b>	
10/15	Jamming Avoidance Response in weakly electric fish: Neural Mechanisms	
<b>III MOTOR STRATEGIES</b>		
10/17	Introduction to Motor Strategies	

	10/22	Mate calling in crickets	Ch. 5
	10/24	Mate calling in crickets	
	10/29	Escape Behavior in Crayfish	Ch. 7
	10/31	Escape Behavior in Crayfish	
Nov	11/5	Vocal production in Fish/Amphibians	
	11/7	Vocal production in Fish/Amphibians	

#### **IV SPATIAL ORIENTATION**

	11/12	Orientation in Sea Turtles	
	11/14	Long Distance Orientation in Birds	
	11/19	<b>EXAM II</b>	
	11/21	Spatial Navigation in Rats	Ch. 12

#### **V BEHAVIORAL NEUROBIOLOGY OF BIRDSONG**

	11/26	Birdsong: Behavior	Ch. 8
	11/28	<b>THANKSGIVING</b>	
Dec	12/3	Birdsong: Learning the Song	
	12/5	Birdsong: Neural Control of Song	
	12/10	Common Themes and Conclusions	
	12/20	<b>FINAL EXAM</b>	

#### Synopsis:

Neurobiology of Behavior: An introduction to the experimental analysis of natural animal behavior, and its neurobiological basis. Behavior is examined in an evolutionary and ecological context, and questions are focused on the neural processes that allow animals to carry out critical activities such as locating prey and finding mates. The course is comparative and strives to identify common principles in sensory and motor processing and brain function. Prerequisite: BBB109

#### Grading:

3 Exams each worth 100 points

#### Required readings:

Behavioral Neurobiology: T.J. Carew, Sinauer Associates, Inc. 2000

#### Supplemental readings:

Lectures and supplemental readings will be posted on Canvas  
<https://courseweb.library.upenn.edu/>