

## BIO451: NEURAL SYSTEMS AND BEHAVIOR

Week	Date	Lecturer	Topic/Papers
1	Jan 10	-----	No class
	Jan 15	Medina	Introduction
<hr/> <b>BLOCK 1: Birdsong</b>			
2	Jan 17	Schmidt	<b>Auditory processing and learning of song</b> <i>Background Reading:</i> Schmidt (2009)
	Jan 22	Medina Schmidt	<b>Paper 1:</b> Mooney (2000) <b>Paper 2:</b> London & Clayton (2008)
3	Jan 24	Schmidt	<b>Neural control of vocal production</b> <i>Background Reading:</i> Schmidt and Ashmore (2008)
	Jan 29	Students Students	<b>Paper 1:</b> Andalman et al. (2011) <b>Paper 2:</b> Sober, Wohlgemuth and Brainard (2008)
4	Jan 31	Schmidt	<b>Basal ganglia circuits and sensorimotor learning</b> <i>Background Reading:</i> Mooney (2009)
	Feb 5	Students Students	<b>Paper 1:</b> Andelman and Fee (2009) <b>Paper 2:</b> Charlesworth et al. (2011)
<hr/> <b>BLOCK 2: Sound localization in barn owls</b>			
5	Feb 7	Schmidt	<b>Coincidence detection and auditory space maps</b> <i>Background Reading:</i> Konishi (1993)
	Feb 12	Students Students	<b>Paper 1:</b> Wagner, Takahashi and Konishi (1987) <i>Additional (optional):</i> Pena and Konishi (2000) <b>Paper 2:</b> Brainard and Knudsen (1993)
6	Feb 14	Schmidt	<b>Adaptive plasticity in the auditory system</b> <i>Background Reading:</i> Knudsen (2002)
	Feb 19	Students Students	<b>Paper 1:</b> Hyde and Knudsen (2002) <b>Paper 2:</b> Bergan and Knudsen (2009)
	Feb 20		FIRST DRAFT OF SONGBIRD PAPER DUE by 11:59 pm
<hr/> <b>BLOCK 3: Olfactory processing</b>			
7	Feb 21	Medina	<b>Temporal coding for odors</b> <i>Background Reading:</i> Su, Menuz and Carlson (2009)
	Feb 26	Students Students	<b>Paper 1:</b> Smear et al (2011) <b>Paper 2:</b> Doucette et al (2012)
8	Feb 28	Ma	<b>Special Lecture</b>

Week	Date	Lecturer	Topic/Papers
9	Mar 5 Mar 7 Mar 12		<b>Spring break</b> <b>Spring break</b> <b>No class</b>
<b>BLOCK 4: Eye movements in monkeys</b>			
10	Mar 14	Medina	<b>The oculomotor system</b> <i>Background Reading:</i> Leigh & Zee (2006)
	Mar 19	Students Students	<b>Paper 1:</b> Major et al. (2004) <b>Paper 2:</b> Krauzlis and Lisberger (1994); Krauzlis (2000)
11	Mar 21	Medina	<b>Visual processing of motion for smooth pursuit</b> <i>Background Reading:</i> Lisberger, Morris and Tychsen (1987)
	Mar 26	Students Students	<b>Paper 1:</b> Khawaja, Tsui and Pack (2009) <b>Paper 2:</b> Inaba et al (2007)
12	Mar 28	Gold	<b>The neural basis of decision-making</b> <i>Background Reading:</i> Gold and Shadlen (2007).
	Apr 2	Students Students	<b>Paper 1:</b> Nichols & Newsome (2002) <b>Paper 2:</b> Hanks & Shadlen (2006)
13	Apr 4	Medina	<b>Models of smooth pursuit: putting it all together</b> <i>Background Reading:</i> Lisberger, Morris and Tychsen (1987)
	Apr 9	Students Students	<b>Paper 1:</b> Ilg, Schumann and Thier (2004) <b>Paper 2:</b> Fukushima et al. (2002)
<b>BLOCK 5: Respiration</b>			
14	Apr 11	Schmidt	<b>The respiratory system</b> <i>Background Reading:</i> Feldman (2003)
	Apr 16	Students Students	<b>Paper 1:</b> <b>Paper 2:</b>
15	Apr 18	Schmidt	<b>Sensorimotor integration and breathing</b> <i>Background Reading:</i>
	Apr 23	Students Students	<b>Paper 1:</b> <b>Paper 2:</b>
16	Apr 29		<b>FINAL SONGBIRD &amp; EYE MOVEMENT PAPERS DUE by 11:59pm</b>