Cognitive Science 107B/201 -- Systems Neuroscience

Professor:
Marty Sereno -- sereno - AT - cogsci
class: MWF 11:00-11:50 AM, Solis 104
ggrad-only lectures: M 10:00-10:50 AM, CSB 180, and during ugrad tests
office hours: M 12:00-2:00 PM, CSB 171, by email appt

Grad Assistants:
Flavia Filimon -- ee mail: ffilimon - AT - cogsci -- section notes
Adam Tierney -- ee mail: atierney - AT - cogsci --
Matthew Leonard -- ee mail: mkleonar - AT - cogsci --

Undergraduate Sections for 107B (one will be canceled)
(A01,02) Mon 9:00-9:50 (WLH 2206), 10:00-10:50 (Center 220)
(A03) Wed 12:00-12:50 (Center 220)
(A04,05) Fri 1:00-1:50 (Center 218), 2:00-2:50 (Center 205)

Readings & Tests--Undergraduate: (test keys)
Required: Squire et al., 2003 Fundamental Neuroscience
Recommended: Full attendance (tests emphasize lecture material)
2 midterms, final -- short-answer (worst midterm:15%, best midterm:45%, final:40%)

Readings & Tests--Graduate:
Graduate readings
3 short-answer homeworks, 3rd includes short paper (quiz1, quiz2, quiz3+shortpap)

Lecture Topics:
(Winter 2007 -- this page: http://cogsci.ucsd.edu/~sereno/107B) (pdf)
1/08 -- Neurons -- membrane potential, action potential (Chap 6)
1/10 -- Neurons -- post-synaptic pot., dendritic propagation (Chap 5)
1/12 -- Neurons -- NMDA channels and learning (Chap 50, lecture-only)
1/15 -- [HOLIDAY]
1/17 -- Networks -- supervised learning (lecture-only)
1/19 -- Networks -- attractor networks (lecture-only)
1/22 -- Networks -- Hebbian feedfoward learning (lecture-only)
1/24 -- Development -- neural tube, cortical areas (Chap 14, 18)
1/26 -- Visual System -- exam review, intro to sensory systems
1/29 -- Visual System -- retina, dLGN (Chap 23)
1/31 -- Visual System -- edges, visual maps (Chap 27, lecture-only)
2/02 -- 1ST EXAM
2/05 -- Visual System -- visual processing streams (Chap 27, lecture-only)
2/07 -- Visual System -- visual motion (Chap 27, lecture-only)
2/09 -- Visual System -- visual attention, objects (Chap 47, 49)
2/12 -- Somatosensory System -- receptors, brainstem (Chap 23)
2/14 -- Somatosensory System -- somatosensory cortex (Chap 25)
2/16 -- Auditory/Vestibular System -- receptors (Chap 23)
2/19 -- [HOLIDAY]
2/21 -- Auditory System -- sound localization (Chap 26, lecture-only)
2/23 -- Auditory System -- echolocation, speech sounds (Chap 26, lecture-only)
2/26 -- Motor System -- gaze stabilization (Chap 33)
2/28 -- Motor System -- coordinate transformations (Chap 33, 48, lecture-only)
3/02 -- 2ND EXAM
3/05 -- Motor System -- striatum, cerebellum (Chap 31, 32)
3/07 -- Motor System -- pattern generators, motor cortex (Chap 29, 30)
3/09 -- Limbic System -- connectional anatomy (Chap 34, lecture-only)
3/12 -- Limbic System -- egocentric place, direction (Chap 51, lecture-only)
3/14 -- Human Brain Imaging -- fMRI, EEG, MEG (lecture-only)
3/16 -- Overflow Lecture
3/19 -- FINAL EXAM (1/2 new, 1/2 cumulative) (Mon) 11:30-2:30 AM