

NGG 573: Neuroscience Core III 2017

Time: MWF, 10:00am-12:00pm

Take-home Exams (80% total), in-class practical (15%), and class participation (5%).

Location: 140 John Morgan Building (Barchi Neuroscience Library); labs meet in 210 Stemmler

Course Directors: Yale Cohen and Chris Pierce

Neuroanatomy Teaching Fellows: Adeeti Aggarwal, Kyra Levy, and Ashley Nemes

Text : *The Human Brain* (John Nolte [N]) ; any version

Principles of Neural Science (Kandel & Schwartz [K&S]), 5th edition

If you do not want to purchase these texts, copies of Kandel are on reserve in the Biomedical Library. Nolte is available through Penn Library's subscription to ClinicalKey; see also the course Canvas website for the link.

Additional readings are found in the "2017 Readings" folder on the course's Canvas website.

Goals of Core III

- (1) Learn the basic structural features of the vertebrate brain at the macroscopic scale (gross = major subdivisions, major connecting tracts).
- (2) Learn to find your way around the brain using the various available maps (atlases) at the corresponding levels of scale: This gets easy as you accomplish goal #1.
- (3) Have an understanding and appreciation of our current understanding of systems and integrative knowledge.

Tests will be distributed electronically via Canvas and will be returned electronically to the designated folder on Canvas. Tests will be given after the completion of certain units and will need to be returned within **72 hours**. We will discuss this more in class. Text in **bold red** below highlight those days when a test will be distributed. These tests may include lectures from one or more topics and one or more lectures.

Grading. The tests will in total be worth 80% of your grade; the practical is 15%; and attendance/participation is worth 5%.

date	topic	lecturer
W, Jan 11	course overview and lab1	cohen
F, Jan 13	lab 2	cohen
M, Jan 16	MLK; no class	

W, Jan 18	Imaging; see canvas	detre
F, Jan 20	Brainstem, N11	levy
M, Jan 23	basics: development K&S 52-56	raper
W, Jan 25	basics: development ; K&S 52-56	raper
F, Jan 27	lab 3	cohen
M, Jan 30	basics: theory; see canvas	geffen
W, Feb 1	basics: theory	geffen
F, Feb 3	vision 1; K&S25-29 and Canvas	vijay
M, Feb 6	vision 2; K&S25-29 and Canvas	diego
W, Feb 8	vision 3 ; K&S25-29 and Canvas	nicole
F, Feb 10	aud 1; N14; K&S30-31	steve/maria
M, Feb 13	aud 2 ; N14; K&S30-31	maria
W, Feb 15	chemo 1; N18; K&S32; Canvas	mainland
F, Feb 17	chemo 2 ; N18; K&S32; Canvas	mainland
M, Feb 20	spinal cord; N10	cohen
W, Feb 22	Somatosensory ; K&S22-23	diego
F, Feb 24	Cerebellum; K&S42	adeeti
M, Feb 27	Movements; K&S33-38 [skip 36]	cohen
W, March 1	eye movements; K&S39-40 ; Canvas	gold
F, Mar 3	Movements ; K&S33-38 [skip 36]; canvas	luo
M, Mar 6	spring break	spring break
W, Mar 8	spring break	spring break
F, Mar 10	spring break	spring break
M, Mar 13	basal ganglia anat; N19	cohen
W, Mar 15	basal ganglia; K&S 43; canvas	long
F, Mar 17	basal ganglia ; K&S 43; canvas	fuccillio
M, Mar 20	overview/introduction	pierce
W, Mar 22	accumbens and addiction	schmidt
F, Mar 24	metabolism	hayes
M, Mar 27	fear and amygdala	thomas
W, Mar 29	sleep	raizen

F, Mar 31	hippocampus and plasticity	cohen
M, Apr 3	pfc	kable
W, Apr 5	TMS	hamilton
F, Apr 7	Pathology	lee
M, Apr 10	BMI	lucas
W, Apr 12	Tbd	tbd
F, Apr 14	Brain Dissection	lee and cohen
M, Apr 17	Brain Dissection	lee and cohen
W, Apr 19	In Class Practice Practical	
F, Apr 21	no class; self practice	
M, Apr 24	Practical	
W, Apr 26	class over	

Handouts and Readings: Posted on the NGG 573 Canvas web site; please check there for readings