

NEURO 203 (NRSC 201) - INVESTIGATIVE NEUROSCIENCE 2013

LECTURE SCHEDULE – as of 15 AUGUST 2013

LSU Neuroscience Center Seminar Room (8th floor)

Lion Eye Center Building, 2020 Gravier Street,

New Orleans LA 70112 USA

Tuesdays & Thursdays – 2 - 4 PM

Course Director: Walter J. Lukiw, BS, MS, PhD

Neuroscience Center and Departments of Neurology and Ophthalmology

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- **Overview:** 23 two-hour lectures by leading experts in the field on neuroscience with emphasis on brain and visual structure and function, technical approaches in research, and brain and visual pathology
- **Grade Evaluation:** one preliminary examination (30%); one research topic paper (30%); one final exam (40%); details will be given in first class meeting 08/15/2013
- **Textbooks** (Note that individual lecturers may assign specific scientific journal articles, or specific chapters from the two texts listed below, or other texts, for review prior to class, disseminated by email as .pdf files):
Basic Neurochemistry, Molecular, Cellular & Medical Aspects, 7th Edition, 2006 (editors Siegel, Albers, Brady, Price); Principles of Neural Science, 5th Edition, 2012, (editors Kandel, Schwartz, Jessel, Siegelbaum, Hudspeth).

SCHEDULE

<u>DATE</u>	<u>TOPIC</u>	<u>LECTURER</u>
08/15	First Class Meeting, introduction to NEURO 203 and course overview	Dr. W.J. Lukiw
08/20	Overview of the nervous system	Dr. T. Weyand
08/22	Experimental design and statistics	Dr. H. Thompson
08/27	Electrotonic properties	Dr. T. Weyand
08/29	Membrane potential/action potential	Dr. S. Gasparini
09/03	The development of nervous system	Dr. C. Wu
09/05	Overview of synaptic transmission and synaptic integration	Dr. C. Canavier
09/10	Synaptic (chemical) transmission and synaptic plasticity	Dr. J. Erickson
09/12	Apoptosis/necrosis/signal transduction/neurovascular unit	Dr. N.G. Bazan
09/17	Receptors and non-classic signaling	Dr. C. Chen
09/19	Regulation of gene expression	Dr. H. Xia
09/24	<u>Preliminary examination (first 11 lectures; 30% of grade)</u>	
09/24	<u>List of 'Neuroscience Research Topics' handed out (each student writes a 3-page research paper)</u>	
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09/26	Gene expression in neurons	Dr. W.J. Lukiw
10/01	Visual System I	Dr. Song Hong
10/03	Visual system II	Dr. M. Jin
10/08	Auditory system I	Dr. H. Farris
10/10	Auditory System II	Dr. Jennifer Lentz
10/15	Motor system	Dr. T. Weyand
10/17	Neuroplasticity and vocal behavior	Dr. Xiao Ching Li
10/22	Speech and language processing	Dr. H. Farris
10/24	Epilepsy	Dr. A. Musto
10/29	Visual system pathology/inflammation	Dr. H.E. Bazan
10/31	Stroke and head trauma	Dr. L. Belayev
11/05	Alzheimer's disease	Dr. Youming Lu
11/07	<u>Final Research Topics Papers due (30% of grade)</u>	
11/07	<u>Final Exam (last 12 lectures; 40% of grade)</u>	
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