

**Psychology 547**  
**Functional Neuroanatomy**  
**Fall 2014**

**Course ID and Title:** PSYC 547  
Functional Neuroanatomy  
**Prerequisites:** Instructor Permission  
**Semester and day/time:** Fall 2014, Tue and Thu 10:00 AM-11:50 AM  
**Classroom:** SOS B51

**Course Instructor/ Director:** **Antoine Bechara**  
Office: HNB-B26  
e-mail: [bechara@usc.edu](mailto:bechara@usc.edu)  
Hours: e-mail or ask in class to schedule a time

**Description:** The course consists of lectures, clinical cases on patients with neurological lesions or diseases for case based learning, and practical sessions involving learning neuroanatomy from Atlases with MRI scans, which are substitutes for laboratory dissections of the human brain and spinal cord. The course material is interrelated throughout these forms of teaching, giving students multiple ways of learning the material.

The objectives of the course are: (1) to introduce basic concepts about the organization, structure, and function of the human central nervous system; (2) to enable students to apply these fundamental principles toward understanding nervous system function and dysfunction and toward clinical problem-solving in relation to neurological and neuropsychological disorders; (3) to provide the necessary background for correlation with related courses, for advanced study of the nervous system, and for monitoring new developments in the basic and clinical neurosciences.

**Attendance and Student Responsibilities:** Students are held responsible for all material covered in class. Students are also responsible for all announcements or schedule changes that are made in class. Attendance at examination is mandatory, unless students receive permission in advance from the Instructor to be excused from attending an examination at the scheduled time.

**Required Textbooks and Course Material:**

1. Course Syllabus, Lecture Materials, and Clinical Cases will be posted on Black Board.

**Suggested Reference Book:**

1. John Nolte: The Human Brain An Introduction To Its Functional Anatomy, 6<sup>nd</sup> Edition, Mosby Elsevier, 2009.

**Examinations and Grading:** There will be 3 midterm tests and a final examination. Final grades will be calculated as follows:

Term Test 1	20%
Term Test 2	25%
Term Test 3	25%
Final Exam	30%
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Total	100%

**Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Statement on Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

**Hybrid, Local Online, or Distance Learning Courses**

Not applicable

## Lecture, Practical, Clinical Cases, and Examination Schedule

Date	class #	Topic Description
8/26	1	Course Introduction, Gross Topography, Meninges
8/28	2	Ventricles, Blood supply of CNS
9/2	3	Spinal Cord
9/4	4	Spinal Cord Syndromes
9/9	5	Clinical Cases Class Discussion 1: Case Based Learning
<b>9/11</b>		<u>Self-study Laboratory Exercise:</u> The human brain (overview) and spinal cord <b>Term Test 1</b>
9/16	6	Medulla and Clinical Correlates: Cranial nerves 1
9/18	7	Pons and Clinical Correlates: Cranial nerves 2
9/23	8	Midbrain and Clinical Correlates: Cranial nerves 3
9/25	9	Clinical Cases Class Discussion 2: Case Based Learning <u>Self-study Laboratory Session:</u> Medulla, Pons, and Midbrain.
9/30	10	Diencephalon: Thalamus and Internal Capsule Hypothalamus and Pituitary, and Limbic System Clinical Correlates
10/2	11	Basal Ganglia and Movement Disorders
10/7	12	Cerebellum and Clinical Correlates
10/9	13	<u>Self-study Laboratory Exercise:</u> Diencephalon, Basal Ganglia, Internal Capsule, and Limbic System
<b>10/14</b>		<b>Term Test 2</b>
10/16	14	CNS Visual Pathways and Control of Eye Movements
10/21	15	Cerebral Cortex and Clinical Correlates 1
10/23	16	Cerebral Cortex and Clinical Correlates 2
10/28	17	Cerebral Cortex and Clinical Correlates 3
10/30	18	Cerebral Cortex and Clinical Correlates 4
11/4	19	Clinical Cases Class Discussion 3: Case Based Learning
11/6	20	Clinical Cases Class Discussion 4: Case Based Learning
11/11	21	<u>Self-study Laboratory Session:</u> Long Association Bundles, Coronal and Horizontal Brain Sections.
<b>11/13</b>		<b>Term Test 3</b>
11/18	22	The Neurologic Exam as a Lesson in Functional Neuroanatomy
11/20	23	Overview of Neuropsychological Syndromes
11/25	24	Functional Anatomy of Major Neurotransmitter Systems and Clinical Correlates
<b>11/27</b>		<b>Thanksgiving</b>
12/2	25	Formation, Modification, and Repair of Neuronal Connections
12/4	26	Introduction to Clinical Neuroradiology

## Final Exam