

**NEUROPSYCHOLOGY
SPRING 2016**

Course: CPSY 461

ONLINE COURSE

***Wednesday 1-4PM Synchronous as noted**

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COURSE DESCRIPTION

Neuropsychology is the interdisciplinary study of the relationship between human brain function and behavior. Neuropsychologists conceptualize what is going on with the brain, body, behavior and emotions of an individual and form a diagnostic impression based on these findings. Subsequently they devise a treatment plan based on this diagnosis that will assist the individual in their goals for functional recovery. This course is a graduate level course in the discipline of neuropsychology and topics related to it, including functional anatomy, scientific foundations, and clinical neuropsychology. Knowledge of neuroanatomy and the development of the central nervous system are critical for understanding brain-behavior relationships in a range of psychological specialties, including counseling and clinical psychology, medical/health psychology, rehabilitation psychology, and neuropsychology. This class will cover the developmental perspective but will focus specifically on adult neuropsychology. Neuropsychological problems and disorders will be explored (i.e., TBI, Dementia, Stroke, Parkinson's) from a multi-disciplinary perspective as well as the perspective of the patient, family members, and caregivers. Assessments used in neuropsychology will be discussed, with a focus on rehabilitation in clinical neuropsychology. A primary goal of the course is to prepare counseling and clinical psychology graduate students to apply neuropsychological concepts in clinical settings, with a focus on rehab psychology.

A neuropsychologist is frequently called upon to assess how brain injury expresses itself in cognitive, behavioral, and emotional deficits. In a rehab setting, the focus is on treatment and discharge planning. Among other questions, the rehab psychologist addresses such issues as:

1. The level of severity and related prognosis associated with the brain injury
2. The area or areas of the brain damage and probable causes of impairment
3. The consequences of the impairment for the patient's daily, occupational, and interpersonal functioning
4. Recommendations and plan of care for coping and rehabilitation while hospitalized, and the best course of action at time of discharge

A primary goal of this course will be to begin developing the students' ability to address the above questions at an introductory level. This will include:

- Learning facts about the CNS function and structure
- Thinking critically about an individual in his/her family, work, and social environment
- Treatment planning and implementation as an integral part of a multi-disciplinary team

Students should be prepared to discuss the readings and activities assigned either in the synchronous format or through message board discussions. The syllabus, any Powerpoint presentations utilized, supplemental readings, and other course materials will be posted on Sakai.

READINGS

Required Texts: We will be using two textbooks to provide ample background knowledge on the vast field of neuropsychology, particularly the functional anatomy of the brain and the clinical aspects of the field. The text reading assignments will at times be supplemented by case studies and personal narratives to offer you first-hand perspectives and to foster a deeper understanding of the work neuropsychologists do on a daily basis with patients and as a member of a multidisciplinary team, as well as a perspective on what it is like to live life with a neuropsychological disorder.

Textbooks:

Vanderah, Todd, W. & Gould, Douglas J. (2016). *Nolte's the Human Brain: An Introduction to its Functional Anatomy*, 7th Edition. Elsevier, Inc: Philadelphia, PA

Morgan, Joel E. & Ricker, Joseph H. (2008). *Textbook of Clinical Neuropsychology*, Taylor & Francis: New York, NY

Both textbooks are available at the Loyola Bookstore

LiveText Link:

<http://www.luc.edu/education/admission/tuition/course-management-fee/>

COURSE REQUIREMENTS

Class Participation and Activities:

This is an online course. As such, all assignments are to be completed on time. Participation during online synchronous class meetings is required. You should be prepared to discuss the assigned readings and to participate in class discussion. On rare occasions, students are in situations that make missing class or arriving late unavoidable. Please email me ahead of time to let me know if you will be absent from synchronous class meetings, or if you will be joining the session late. You are responsible for getting information that you may have missed if you are late or miss the session.

Exams:

Two exams will be administered (a mid-term and a final) and each will count toward 25% of your grade. You will be evaluated on comprehension of the material assigned in the readings and in lectures during synchronous classes. The purpose of the exams is to make sure that students are mastering the content from lectures and reading assignments. You will be asked to demonstrate critical thinking abilities about neuropsychological content.

Paper:

One paper is required, accounting for 25% of your grade. Topics are to be decided prior to the assignment deadline. You will be expected to integrate the material from the reading assignments and lectures, as well as relevant background experiences to demonstrate excellent critical thinking abilities and writing skills. Please email your papers to me by 1:00 PM on the due date.

Presentation:

Each student will put together a PowerPoint presentation or a video on the topic of their choice (topics will be provided to select from, or you may choose one of your own that is cleared by the instructor). These are to be posted on Sakai on the due date and will account for 25% of your grade.

GRADING RUBRIC

Exams:	50% (25% each)
Paper:	25%
Presentation:	25%

CLASS SCHEDULE

Other readings may be assigned that are not included on the present syllabus. Any changes to the syllabus will be posted on Sakai or sent via email. Students are responsible for staying informed.

DATE	TOPIC/ASSIGNMENTS	READINGS
Week 1: 1/20/16	INTRODUCTIONS Post on Sakai: Your specialization and background. What you hope to learn in this class, and how you might apply it professionally. Intro to anatomy of the brain and CNS Training Models in Neuropsychology	Ch. 1 Nolte's The Human Brain (THB) and Ch. 2 Textbook of Clinical Psychology (TCP)
Week 2: 1/27/16	Development of the Nervous System	Ch. 2 (THB)
Week 3: 2/3/16	Gross Anatomy and Organization of the CNS	Ch. 3 (THB)
Week 4: 2/10/16	Neurodevelopmental disorders and TBI of Childhood *NOTE: I will not have access to SAKAI this week, but I will be able to access email occasionally.	Ch. 8 and Ch. 11 (TCP)
Week 5: 2/17/16	The Spinal Cord	Ch. 10 (THB)

Week 6: 2/24/16	*Synchronous* Class time 1-4PM (Platform and instructions for signing in TBA) Topics due for presentations and papers (see list below) – Email Instructor with topics for each before class time at: lmattera@luc.edu Review Sheet for Mid-Term Exam Normal aging, MCI, and Alzheimer’s	Ch. 39 (TCP)
Week 7: 3/2/16	MID-TERM EXAM (on material covered in weeks 1-6)	
Week 8: 3/9/16	No class/Spring Break	
Week 9: 3/16/16	Vascular Dementia Intracranial Hemorrhage, vascular malformations Cerebral aneurysms, SAH	Ch. 19 and 20 (TCP)
Week 10: 3/23/16	*Synchronous* Class time 1-4PM Examples/brief overview of assessments used in NP Rehabilitation in Clinical Neuropsychology	Ch. 49 (TCP)
Week 11: 3/30/16	TBI (Mild, moderate, severe and Postconcussion syndrome)	Ch. 21 and 22 (TCP)
Week 12: 4/6/16	Amnesias/Patients w/schizophrenia Papers Due (send via email: lmattera@luc.edu)	Ch. 37 and 38 (TCP)
Week 13: 4/13/16	Parkinson’s Disease	Ch. 28 (TCP)
Week 14: 4/20/16	Presentations due: Post to Sakai. Huntington’s Disease	Ch. 32 (TCP)
Week 15: 4/27/16	Intracranial Tumors Toxins in the CNS Wrap up and Review Sheet for Final Exam	Ch. 29 and 30 (TCP)
Week 16: 5/4/16	FINAL EXAM (on material covered weeks 9-15)	

PAPER AND PRESENTATION TOPICS:

Choose one topic for your paper and one for your presentation from the following list. If there is another topic you are interested in that relates to Neuropsychology, please email me for approval. Presentations should be 15-20 minutes in length via PowerPoint (or video format if you so choose). Length of papers: Minimum 5 pages, maximum 10 pages.

- TBI in childhood
- Autistic disorder
- ADHD
- Stroke and Ischemic disorders
- Dementia and Delirium (types of each, differences between the two)
- TBI in adults (i.e., parts of brain injured and the effects; what to expect in recovery)
- Mild Traumatic Brain Injury and Postconcussion syndrome
- Parkinson's/Parkinsonism and Huntington's disease
- Forensic Neuropsychology
- Ethical Issues in Neuropsychology
- Technology used in Neuropsychology (CT, MRI, etc)
- Assessments used in Neuropsychology
- Brain Tumors
- Multiple Sclerosis
- Seizure Disorders
- Emotional and Psychosocial Factors in brain injury and disorders
- Toxins in the CNS (alcohol, illicit drugs, etc)
- Neuropsychology of sports related injuries
- Co-morbidities (i.e., personality disorders, schizophrenia) and how they affect neuropsychological treatment
- Rehab Psychology and Behavioral plans for those with TBI
- Alzheimer's disease vs. other dementias
- Other topics pending approval from instructor
- Extent research in NP and evidence based treatments

IDEA Objectives:

1. Gaining factual knowledge (terminology, classifications, methods, trends)
2. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
3. Acquiring skills in working with others as a member of a team

IDEA Course Evaluation Link for Students

<http://luc.edu/idea/>

Use the above link and go to the **Student IDEA Log In** to complete the course evaluation at the end of the course.

Diversity

Loyola University Chicago supports an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized as a source of strength. We expect that students, faculty, administrators and staff within the SOE at Loyola University Chicago will respect differences and demonstrate diligence in understanding how other peoples' perspectives, behaviors, and worldviews may be different from their own.

Conceptual Framework: *The School of Education's mission is social justice, but our responsibility is social action through education.* Social action through education serves as our conceptual framework and the foundation to the School of Education Conceptual Framework standards – standards that are explicitly

embedded in major benchmarks across all SOE programs. The complete **Conceptual Framework** can be found at the following link: <http://luc.edu/education/syllabus-addendum/>

Dispositions

This course will also be used to evaluate students' *professionalism and fairness*, both of which are core dispositional expectations of candidates in the School of Education.

COURSE POLICIES

Please refer to this link <http://luc.edu/education/syllabus-addendum/> for information on:

- o **Academic Honesty**
- o **Accessibility**
- o **Conceptual Framework**
- o **EthicsLine Reporting Hotline**
- o **Electronic Communication Policies and Guidelines**