

CIEP 484: Biological Foundations of Behavior

Loyola University Chicago
Summer Session II 2016
7/5/2016 – 8/9/2016

Instructor: Lauren McArdle, Ph.D.
Location: Corboy Law Center – Room 303
Meeting time: Tuesday/Thursday 8:00AM – 11:00AM
Office Hours: By Appointment

Instructor Contact Information:

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Required Textbooks:

Miller, Daniel C. (2013). *Essentials of School Neuropsychological Assessment – Second Edition*. Hoboken, NJ: John Wiley & Sons, Inc.

Live Text Access: [LiveText](#)

Supplementary Texts (selected readings posted to Sakai):

Arden, J., & Linford, L. (2009). *Brain-based therapy with adults: Evidenced-based treatment for everyday practice*. Hoboken, NJ: John Wiley & Sons.

Davis, A (Ed.). (2013). *Psychopathology of childhood and adolescence: A neuropsychological approach*. New York, NY: Springer Publishing Company, LLC.

Feifer, S. G., & Rattan, G. (Eds). (2009). *Emotional disorders: A neuropsychological, psychopharmacological, and educational perspective*. Middletown, MD: School Neuropsych Press, LLC.

Feifer, S. G., & Della Toffalo, D. A. (2007). *Integrating RTI with cognitive neuropsychology: A scientific approach to reading*. Middletown, MD: School Neuropsych Press, LLC.

Hale, J. B., & Fiorello, C. A. (2004). *School neuropsychology: A practitioner's handbook*. New York, NY: Guilford Press.

Miller, D. C. (Ed). (2010). *Best practices in school neuropsychology: Guidelines for effective practice, assessment, and evidence-based intervention*. Hoboken, NJ: John Wiley & Sons, Inc.

Wilens, T. E. (2009). *Straight talk about psychiatric medications for kids – 3rd Edition*. New York, NY: Guilford Press.

The Mission of the Loyola University Chicago, School of Education

The School of Education at Loyola University Chicago, a Jesuit and Catholic urban university, supports the Jesuit ideal of knowledge in the service of humanity. We endeavor to advance professional education in the service of social justice, engaged with Chicago, the nation, and the world. To achieve this vision the School of

Education participates in the discovery, development, demonstration, and dissemination of professional knowledge and practice within a context of ethics, service to others, and social justice. We fulfill this mission by preparing professionals to serve as teachers, administrators, psychologists, and researchers; by conducting research on issues of professional practice and social justice; and by partnering with schools and community agencies to enhance life-long learning in the Chicago area.

Course Description

Students will learn basic biological foundations of behavior as they relate to the assessment of and intervention with students in school settings. Additionally, students will demonstrate an understanding of the biological bases of behavior and how these issues are linked to academic and behavioral challenges faced by students through various classroom activities. Evidence-based interventions for several behaviors will be discussed.

Academic Honesty

Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education's Policy on Academic Integrity can be found at: http://www.luc.edu/education/academics_policies_integrity.shtml. For additional academic policies and procedures refer to: http://www.luc.edu/education/academics_policies_main.shtml.

Accessibility

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd/>.

Candidates with Special Needs: If you are a candidate who requires additional academic supports, please let me know on the first day of class.

Conceptual Framework

The Conceptual Framework for the Loyola University Chicago, School of Education is *Social Action through Education*. Specifically, this course will address how assessment and intervention practices within school settings can fit within the SOE conceptual framework, and how school psychologists might work to develop more ethically sound practices in the areas of assessment and intervention – ensuring that ALL students have their social, emotional, academic, and behavioral needs met within the school setting. Discussion of the mission of the school of education and the framework can be found online at: <http://www.luc.edu/education/mission/>

Diversity

Diversity of student learners will be emphasized through course content, as biological differences in learners is a strong component of CIEP 484: Biological Bases of Behavior. Graduate students will receive an overview of how students with varying needs learn and process information differently – and will also receive an overview of interventions designed to meet specific student needs. An appreciation for differentiated instruction and individualized intervention for diverse learners is also an emphasis of the course.

Technology

Students will do research on the computer related to assessment procedures, participate in online activities and access course materials on Sakai (formerly Blackboard).

Professional Expectations of the Instructor (Dispositions)

- Participation and completion of all module readings, activities, and assessments are critical to student learning for this course. In order to be successful in CIEP 484 – *all* activities within a given lesson plan are to be completed.
- Regular attendance is critical to student learning for this course; it is the expectation that students communicate with the instructor in advance of an absence so the instructor may prepare the student for work to be completed in their absence from the class.
- The core disposition of “**Professionalism**” will be evaluated by review of communications between students and the instructor, as well as through review of timeliness with regard to assignment deadlines. The core disposition of “**Belief that ALL students can learn**” will be evaluated through a review of participation in class discussions and assignment submissions; should the instructor feel that students are completing assignments in a manner that indicates bias toward a certain learner group (i.e., students with autism, students with behavioral issues), the student will be addressed privately/individually by the instructor.

Course Objectives

This is a seminar course on cognitive neuropsychological foundations in school psychology. The cognitive neuropsychological basis of educational theories and practices are studied and critically examined. Emphasis is placed on current brain research, and an assessment model is presented that is based on the Cognitive Hypothesis Testing model (Hale & Fiorello, 2004). A discussion of how neuropsychological processes and medications impact learning, social interactions, and behavioral functioning within the school setting. The course is for nonmedical professionals and provides a basic knowledge of cognitive neuropsychological principles of brain functioning, neuropsychological assessment, evidence-based intervention, and basic psychopharmacological knowledge. At the conclusion of the course students will understand:

1. How brain functioning can impact student learning (NASP Standards 1 & 11)
2. How to translate current brain research into educational practice (NASP Standards 1, 7, & 11).
3. How to integrate a knowledge of biological foundations into developing interventions in the educational setting (NASP Standards 1, 3, 7, & 8)
4. Importance of collaboration with teachers, parents, and other professionals (NASP Standards 5 & 10)

IDEA Evaluation Course Objectives

In addition to traditional course objectives (listed above), the following four objectives will be considered to be of critical importance when evaluating the course; IDEA objectives for evaluation are as follows:

1. Gaining a basic understanding of the principles of behavior and biological underpinnings of behavior (e.g., factual knowledge, methods, principles, generalizations, theories)
2. Learning to apply course material in school psychology practice (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by school psychologists in the field (primarily related to assessment and intervention skills)

The link for course evaluations (to be completed at the conclusion of this course) is included here: <http://luc.edu/idea/>; once you have arrived to the web page, please select **Student IDEA Log In** in order to access course evaluations.

Evaluation Procedures

Grades will be based on the following assessment procedures:

<i>Weekly Participation Points</i> (5 pts. per lesson, 2 lessons per week, 12 lessons total)	60 points
<i>Weekly Assessment Points</i> (5 pts. per lesson, 2 lessons per week, 12 lessons total)	60 points

points Percent	Points	Grade
93-100	186-200	A
90-92	180-185	A-
87-89	174-179	B+
83-86	166-173	B
80-82	160-165	B-
77-79	154-159	C+
73-76	146-153	C
70-72	140-145	C-
60-69	120-139	D
<59	<119	F

Weekly Participation Points (60 points): Students can potentially earn 5 participation points per lesson, for a total of 60 points for the term (12 total lessons, including the final exam; students will automatically earn the participation points for the day upon completion of the final exam). Participation point activities will be communicated during the course of instruction. Examples of potential participation activities include in-class assignments, in-class case reviews/presentations, etc. ***Please note, participation points cannot be made up in the event of a student absence.***

Weekly Assessment Points (60 points): Students can potentially earn 5 assessment points per lesson, for a total of 60 points for the term (12 total lessons, including the final exam; students will automatically earn the assessment points for the day upon completion of the final exam). Assessment activities will be outlined clearly within lesson plans – as well as within the syllabus (see Course Agenda, below). Examples of potential assessment activities include quizzes and case study analyses. ***In the event of a student absences, students ARE allowed to make up the weekly assessment task within a set timeframe (to be determined by the instructor).***

FINAL (80 points): At the end of the semester, students will complete an objective final assessment, which will integrate concepts learned across the course of the summer term. Students will be asked to use their knowledge of assessment and intervention to answer questions regarding biological terms related to learning/behavior processes, assessment procedures/instruments, and intervention design.

CIEP 484 Course Agenda

(readings and topic discussion dates subject to change)

NOTE: All readings not found in the required text will be posted to Sakai

Week/Lesson	Topic(s)	Readings	Assessment Task
Week 1 – Tuesday 7/5/16	Course Overview Introduction to School Neuropsychology CHT Model Brain Development	Miller, Ch. 1 (review) Miller, Ch. 2 (review) Miller, Ch. 5 (review) Hale & Fiorello, Ch. 2, pp. 43-51	Task analysis assignment

	<u>Basic Brain Anatomy</u>		
<i>Week 1 –</i> Thursday 7/7/16	Brain Organization School Neuropsychological Assessment Model <u>Sensory-Motor Functions</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Hale & Fiorello, Ch. 2, pp. 51-77 Miller, Ch. 5 Miller, Ch. 10	Brain organization chart completed
<i>Week 2 –</i> Tuesday 7/12/16	<u>Attention</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Miller, Ch. 14 Best Practices in School Neuropsychology (Ed. Miller), Ch. 11	Attention concepts quiz
<i>Week 2 –</i> Thursday 7/14/16	<u>Visual-Spatial Processing</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention <u>Language</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Miller, Ch. 11 Miller, Ch. 16 (review)	Visual/Spatial & Language concepts quiz
<i>Week 3 –</i> Tuesday 7/19/16	<u>Learning & Memory</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Miller, Ch. 12 Best Practices in School Neuropsychology (Ed. Miller), Ch. 25	Learning & Memory concepts quiz
<i>Week 3 –</i> Thursday 7/21/16	<u>Executive Functioning</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Miller, Ch. 13 Best Practices in School Neuropsychology (Ed. Miller), Ch. 24	Executive Functioning concepts quiz
<i>Week 4 –</i> Tuesday 7/26/16	<u>Traumatic Brain Injury (TBI), Seizure Disorders, Autism</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Readings posted to Sakai	Case analysis task
<i>Week 4 –</i> Thursday 7/28/16	<u>Specific Learning Disabilities</u> <ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 	Readings posted to Sakai	Intervention review task
<i>Week 5 –</i> Tuesday 7/31/16	<u>Depression, Anxiety, OCD, Bipolar Disorder</u>	Readings posted to Sakai	Differential diagnosis task

	<ul style="list-style-type: none"> • Biological Bases • Assessment • Intervention 		
Week 5 – Thursday 8/2/16	Psychopharmacology Case Study Analyses Report Writing	Readings posted in Sakai	Case analysis task
Week 6 – Tuesday 8/7/16	Final Review Activity	NONE	Review activity assigned, <i>completion counts for participation and assessment points for Week 6/Session 1</i>
Week 6 – Thursday 8/9/16	FINAL EXAM	Final Review Activity answers posted to Sakai	Final Exam, <i>completion counts for participation and assessment points for Week 6/Session 2</i>