

**LOYOLA UNIVERSITY CHICAGO  
SCHOOL OF EDUCATION**

**CIEP 484-001: Biological Basis of Behavior  
Spring 2022**

**Tuesdays 10am -12:30pm CST  
CLC room 523**

**Instructor(s):**

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**SCHOOL OF EDUCATION VISION AND MISSION**

The School of Education of Loyola University Chicago is a community that seeks to transform members to impact local and global communities through the principles of social justice.

The School of Education at Loyola University Chicago, a Jesuit Catholic urban university, supports the Jesuit ideal of knowledge in the service of humanity. We endeavor to advance professional education in 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 who work across the developmental continuum, and by conducting research on issues of professional practice and social justice.

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**COURSE DESCRIPTION**

Students will be introduced to the basics of the biological foundations of behavior and the emerging practice of School Neuropsychology. In this course, students will be exposed to theories regarding brain development, the anatomy of the brain, and theories and frameworks for assessment based on a neuropsychological lens. Students will also be given the opportunity to explore various areas of neuropsychological functioning often assessed by school psychologists. This course is designed to build upon prior assessment courses in the areas of cognitive and social emotional assessment as well as research and evidence-based intervention.

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**METHOD OF INSTRUCTION**

Students should expect to dedicate 6-8 hours per week on average to completing work for this course. This includes class time and readings or work required in order to prepare for class.

Instructional methods for this course will rely heavily on discussion of course readings, critical thinking, and problem-solving through difficult questions. Students will need to come to class having read the assigned readings in order to fully participate in class discussions and application activities.

Students are also expected to **meet face-to-face every Tuesday from 10am-12:30pm CST**, beginning the first week of classes in order to explore course content and connect with each other over new learning. Class is mandatory and attendance will be monitored. The instructor reserves the right to move classes to synchronous online or asynchronous when deemed necessary due to the unpredictable global pandemic.

### **REQUIRED TEXTBOOKS**

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D'Amato, R. C., Davis, A. S., Power, E. M., & Cruz Eusebio, E. (2021). *Understanding the biological basis of behavior: Developing evidence-based interventions for clinical, counseling, and school psychologists*. Springer Nature.

Miller, D. & Maricle, D. (2019). *Essentials of school neuropsychological assessment, third edition*. John Wiley & Sons, Inc.

Other sources, such as peer-reviewed articles and videos, will be assigned and posted on Sakai.

### **SCHOOL OF EDUCATION MISSION AND CONCEPTUAL FRAMEWORK**

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This course will equip students with the knowledge, skills of inquiry, and ethics necessary to be professional and socially just practitioners. The framework components fulfilled by this course are:

CFS3: Candidates demonstrate knowledge of ethics and social justice.

CFS4: Candidates engage with local and/or global communities in ethical and socially just practices.

Here is the link to the LUC SOE Conceptual Framework: [www.luc.edu/education/mission/](http://www.luc.edu/education/mission/).

### **ESSENTIAL COURSE OBJECTIVES**

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- Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
- Learning to apply course material (to improve thinking, problem solving, and decisions)
- Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
- Learning to apply knowledge and skills to benefit others or serve the public

### **NASP DOMAINS**

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The school psychology program at Loyola University Chicago is a NASP approved EdS program. This course is aligned with the NASP 2020 Domains for Professional Practice to support the development of school psychologists who employ an integrated model of service delivery. Specifically, in this course, students will be expected to learn content aligned to the following domains:

- 2.1 Data-Based Decision Making and Accountability
- 2.3 Interventions and Instructional Support to Develop Academic Skills
- 2.4 Interventions and Mental Health Services to Develop Social and Life Skills
- 2.5 School-Wide Practices to Promote Learning
- 2.8 Diversity in Development and Learning

### **APA COMPETENCY BENCHMARKS**

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The school psychology program at Loyola University Chicago is an APA accredited PhD program. This course is aligned with the APA Benchmarks for Competency Development of Psychologists in the areas of:

- 6B Scientific Foundation of Psychology
- 6C Scientific Foundation of Professional Practice
- 8A Knowledge and Application of Evidence-Based Practice
- 9B Knowledge of Assessment Methods
- 9C Application of Assessment Methods
- 10A Intervention Planning
- 10C Intervention Implementation
- 11B Addressing Referral Question

### **CLASS COMMUNICATION**

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Email and Sakai will be the primary methods of communication with students enrolled in this course. Students should expect a response from the instructor to any communication within 24-48 hours. Because Sakai uses your Loyola computer account, students are responsible for making sure that their account is in good working order. Also, students are responsible for checking their account for emails related to this class. If you have a personal email you would rather use, you may forward emails from your student account to the personal account. Emails will only be sent to Loyola email accounts.

## DISPOSITIONS

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All courses in the SOE assess student dispositions. As a result, your syllabus is required to have a statement describing which SOE dispositions will be assessed in the course: **Professionalism, Inquiry, and Social Justice**. Full transparency is critical to ensure that students are able to meet the expectations in this area. *Please be sure to state the disposition or dispositions that are assessed in the course and direct students to where they can locate the rubric on LiveText.* A description of how we use disposition data in the SOE is included in the SOE syllabus addendum.

## TECHNOLOGY

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In the event that class will be moved to fully online, students will need access to internet and a computer with a built-in video camera or a separate webcam. For further guidance on technology for online learning, please revisit the [Technology Recommendations for Online Learning on the School Psychology Orientation site](#).

In addition to mastering the online learning technology, such as Sakai, Panopto, Zoom, and VoiceThread, this course assumes a basic and practical knowledge of technology. Students are expected to be proficient at word processing (including creating tables and figures), preparing PowerPoint presentations, communicating via Loyola Outlook e-mail, and downloading Microsoft Word and Acrobat Reader files.

## DIVERSITY

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In concert with the conceptual framework for the School of Education, faculty and students will be expected to show respect and sensitivity to individual, cultural, social, and economic diversity. Students who display insensitive behaviors to diversity will be provided feedback and, depending on the behavior, may receive a disposition warning.

## LANGUAGE AND IDENTITY

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Our use of language as school psychologists can serve as a tool for creating an inclusive community. Students and the instructor will use people-first language in all communication that describes people as people first before their group identity or prescribed classification. For example, we will practice saying child with an Autism Spectrum Disorder, instead of “Autistic kid.” In terms of race, we may say student of color. Further, we will practice using the pronouns “they” and “them” to represent individuals who are gender non-binary. Note that some in the disabled community prefer that you use their identity first in describing them. For instance, someone who is Deaf may prefer that you refer to them as a Deaf woman, man, or person. See chapter 5 of the Publication Manual of the American Psychological Association, 7<sup>th</sup> edition for further clarification or the National Inclusion Project for great resources.

## STUDENTS WITH SPECIAL NEEDS

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If you are a student who requires accommodations due to a special need and would like to receive those accommodations while taking this course, please notify the instructor as soon as possible, preferably before the start of the course, so that these accommodations are provided. All accommodations will be considered in order to ensure that students with special needs have equal access to the course. Please note that the instructor will be in regular communication where necessary with the Student Accessibility Center (SAC) to ensure your needs are being met at Loyola standards. If you would like to learn more about supports that would make this course more accessible, please contact the SAC for assistance by visiting their website at <https://www.luc.edu/sac/>.

## **COURSE EVALUATION**

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Loyola uses the Smart Evaluation system for course evaluations. Students are encouraged to take the evaluation at the end of the semester to provide feedback based on their experience with the course and instructor. Students will be contacted via email regarding the window for evaluation near the end of the semester. Please take the time to complete this evaluation and provide feedback. For more information on the course evaluation system, refer to the addendum on the last page of this syllabus.

## **GRADED ASSIGNMENTS**

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All work submitted for grading should follow the following expectations across all assignments:

- All papers submitted should be completed as a Word document. No PDFs or RTF files will be accepted. Work that is submitted as a PDF or RTF file will be returned and the student may lose points for not following directions.
- Students should save their work using the following file saving conventions: LastName\_CIEP484\_assignmentname.doc.
- Work should be uploaded to Sakai in the Assignments tab. No work will be accepted via email.
- Students should use APA format 7<sup>th</sup> edition to structure papers and presentations. This includes using an accepted font type, 12 pt font size, double-spaced, and 1-inch margins.
- Work should be free of significant grammatical, spelling, and typographical errors. Papers submitted that are not legible due to the amount of errors will be returned to the student with a possible failing grade.

**Engagement.** Students will be expected to complete various activities around course content, including, but not limited to, classroom discussions, self-reflection blogs, and other application based activities. More than 1 absence from a scheduled class meeting will result in a deduction of 10 points for each incomplete activity or excessive absence from the engagement grade. The instructors have the discretion to waive this 1 absence requirement in the case of personal or

pandemic related emergencies. Students are expected to make up missed work in the event that they have to miss a scheduled class meeting.

**Neuroanatomy Exam.** After completing the assigned readings and engaging in classroom-based applied activities around the anatomy of the brain, students will be expected to demonstrate mastery of the parts and functions of the brain by passing an exam that will be administered in class by the instructors on the scheduled date. This will be a closed book independent exam.

**Biological Disorder Presentation.** Students will work in groups to research a given area of disability that is founded in a biological disorder. Students will sign up for a group towards the middle of the semester and dates for presentations will co-occur with the date the biological function is being discussed in class. Students must develop a presentation to help the audience understand the following:

- What is the disorder and how is it related to the biological foundation?
- What are the key markers of the disorder?
- What are the implications for the disorder in social-emotional well-being and school performance?
- How is this disability assessed by school psychologists?

Each group must create a presentation that is 15-20 minutes long and includes the above-mentioned information. Students are expected to use current, no more than 7 years old, peer-reviewed research for content unless given permission by the instructors to use older sources. All group members should have a speaking role in the presentation. The rubric for this assignment is included at the end of this syllabus.

**Intervention Design Project.** Students are expected to create an implementation plan for a research or evidence-based intervention that targets a biological based disorder covered in class that could be implemented at tier 2 or 3 in a school setting. Students do not need to use the same topic they presented on for their group project. The plan should include current peer-reviewed research and the following:

- a brief but comprehensive description of the intervention including how it is implemented and the systemic factors required for implementation success
- an explanation of how the intervention supports those with the disorder
- a plan for progress monitoring that allows for the collection of baseline data and any assessments you would need to include prior to implementation
- how you as the school psychologist would collaborate with stakeholders to support the student(s) receiving the intervention (e.g. families, teachers, community, and, if applicable, the student)

This project should be submitted in Sakai under the assignments tool as a formal and professional paper using APA writing format and conventions that is 8-10 pages in length. The rubric for this assignment is included at the end of this syllabus.

### **DEADLINES AND LATE ASSIGNMENTS**

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Readings are due on the dates indicated in Sakai and in the course schedule. Assignments are also due on or before the due date and must be submitted through Sakai. Please contact the instructor prior to a deadline in order to be eligible for an extension. If you have a significant medical problem or emergency situation, please contact the instructor as soon as possible to discuss making up work/turning in late assignments. All extensions/make-ups are at the instructor's discretion. Without prior approval, late assignments will have 10% of the total points possible deducted for each day past the due date.

### **EVALUATION & GRADING PROCEDURES**

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Grades will be assigned based on one's collective performance on graded assignments and engagement online with the course. All assignments will be graded using a rubric that clearly indicates the criteria for grading in order to provide consistency and transparency. The rubric for each assignment is included at the end of this syllabus and also posted in Sakai for the respective assignment. *Students are responsible for asking questions and seeking further clarification if the expectations for the assignment are unclear.* The components of one's grade are as follows:

<b>Assignment</b>	<b>Points Possible</b>
Engagement	100
Neuroanatomy Exam	100
Biological Disorder Presentation	100
Intervention Design Project	100

Grades will be given using the following scale:

<b>Grade</b>	<b>%</b>
A	94-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66
F	< 60

## PRIVACY STATEMENT

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Recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Students will be informed of such meetings in which they will be recorded and asked for consent to be recorded. In the case that a meeting is recorded, the recording will not be used outside of this course.

## SCHOOL OF EDUCATION COMMITMENT- COVID-19

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Loyola's School of Education (SOE) recognizes that this is an unprecedented time. We understand that moving into the 2021-2022 academic year while living in the context of the COVID-19 pandemic may stir feelings of uncertainty, fear, or anxiousness. We want you to know that your safety, health, and well-being, as well as that of our faculty and staff, remain our primary concern. We want to be able to support you in any way that we can. We ask you to embody the Jesuit value of [\*Cura Personalis\*](#), or care for the whole person, as we prepare to learn together. We ask that you consider your way of being in this community, to act with care, and treat all with dignity to keep yourself and others safe. If you are not feeling well, please use Loyola's SYMPTOM Checker. It can be found on the webpage or APP [Loyola Health](#) under the **[COVID -19 Related Information Tab](#)** at the top of the page.

The University understands that you may encounter obstacles that make reaching academic goals more difficult. We strongly encourage you to access the Student Resources on [Loyola's COVID-19 Response webpage](#) for information, supports, and resources on basic needs such as housing, food, financial aid, and medical and mental health. This web page also offers information on official University communications, access to technology, and student services. All Loyola University Chicago administrators, faculty, and advisors are also here for you.

The SOE is committed to working with all students to address any challenges that may arise during the semester. Please reach out to your professor as early as possible to discuss any accommodations you think may be necessary in order for you to successfully complete your coursework. Active and engaged communication with all of your professor is encouraged. We know the FALL 2021 Return to Campus will be like no other, but through collaboration, communication, and shared responsibility, we will not only get through this difficult time; we will thrive.

**\*COVID-19 Required Personal Safety Practices:** We all have a part to play in preventing the spread of COVID-19. Following a simple set of required personal safety practices can lower your own risk of being infected and can help protect others. All members of the Loyola community are expected to follow these practices while on any of the University's campuses. **Face masks or face coverings must be worn by all students, faculty, and staff while on any of Loyola's campuses, when in the presence of others, in classrooms, and in public settings where other social distancing measures are difficult to maintain.** Appropriate use of face masks or coverings is critical in minimizing the risks to others around you, as you can spread COVID-19 to others even if you do not feel sick. Please be sure to review all [LUC REQUIRED Safety Protocols](#).

**\*COVID-19 Reporting Protocol:** In preparation for our upcoming semester, Loyola University Chicago's Emergency Response Management team has been working to develop [protocols](#) in accordance with Centers for Disease Control and Prevention (CDC) guidelines that help ensure the health and safety of our community. Given the rising number of COVID-19 cases across our country, it is very likely that incidence within our community will occur in the fall.

Students, faculty, and staff who have tested positive for COVID-19 must report their case to the University as soon as possible. **If you have tested positive for the virus, please contact us at [covid-19report@LUC.edu](mailto:covid-19report@LUC.edu) or by calling 773-508-7707. All COVID-19-related questions or feedback should continue to be sent to [covid-19support@LUC.edu](mailto:covid-19support@LUC.edu), not the new case reporting email address.**

## COURSE OUTLINE

*(This outline is subject to change to accommodate extenuating circumstances. Students will be notified in advance if any changes to this outline are made.)*

Date	Topics	Readings	Assignments
January 18th	Introduction to the requirements of the course [synchronous]	What Is Neuropsychology? YouTube video [Sakai]	Get started on reading for next week!
January 25th	History of School Neuropsychology and Theoretical Foundations	Miller & Maricle (2019) Chps. 1 & 2 Flanagan et al. Chps. 3 & 6 (review) D'Amato et al. Chp. 1	
February 1st	Basic Brain Structures and Functions of the Brain	D'Amato et al. (2021) Chps. 2&3	
February 8th	Clinical Neuropsychology and Child Biological Disorders	Miller & Maricle (2019) Chp. 4 D'Amato et al. (2021) Chp. 4	
February 15th	NASP Convention		
February 22nd	Neuropsychological Assessment Models and Batteries	Miller & Maricle (2019) Chps. 5 & 7 D'Amato et al. (2021) Chp. 9	Brain Labeling Quiz
March 1st	Attention and Executive Functioning	Miller & Maricle (2019) Chps. 13 & 14 Stroop Test Video [Sakai] Goldstein & Naglieri (2008)	Group Presentation
March 8th	Spring Break		
March 15th	Learning and Memory	Miller & Maricle (2019) Chp. 12 Learning and Memory Video [Sakai]	Group Presentation
March 22nd	Visuospatial and Auditory Processing	Miller & Maricle (2019) Chps. 11	Group Presentation
March 29th	Sensorimotor Functioning	Miller & Maricle (2019) Chp. 10 Grooved Pegboard and Beery VMI Video [Sakai]	Group Presentation
April 5th	Acquired Knowledge: Academic Achievement & Language	Miller & Maricle (2019) Chps. 16 & 17	Group Presentation
April 12th	Social-Emotional Functioning	Aspen Institute Brief (2018)	Group Presentation

		Decker et al. (2015) Hyde et al. (2020)	
April 19th	Neuroimaging and CTE Traumatic Brain Injury	D'Amato et al. (2021) Chp. 5	Group Presentation
April 26th	Class Wrap-Up		Design an Intervention Plan/Resource

### Biological Disorder Presentation Rubric

Criteria	Does Work Meet Criteria?	Strengths	Areas for Growth
<p><b>The presentation provides a thorough description of the disorder and its biological foundation.</b></p> <p style="text-align: center;"><i>15 points</i></p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Not Yet</p>		
<p><b>The presentation shares key markers of the disorder.</b></p> <p style="text-align: center;"><i>15 points</i></p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Not Yet</p>		
<p><b>The presentation raises implications for social emotional and academic well-being.</b></p> <p style="text-align: center;"><i>25 points</i></p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Not Yet</p>		
<p><b>The presentation describes the assessment process for the disorder.</b></p> <p style="text-align: center;"><i>25 points</i></p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Not Yet</p>		
<p><b>The presentation is professionally composed and includes current peer reviewed sources.</b></p> <p style="text-align: center;"><i>20 points</i></p>	<p style="text-align: center;">Yes</p> <p style="text-align: center;">Not Yet</p>		

### Intervention Project Rubric

Criteria	Does Work Meet Criteria?	Strengths	Areas for Growth
<p><b>The plan includes a description of the intervention as directed and is appropriate at the tier 2 or 3 level.</b></p> <p><i>25 points</i></p>	<p>Yes</p> <p>Not Yet</p>		
<p><b>The plan provides an explanation of how the intervention supports those with the targeted disorder.</b></p> <p><i>15 points</i></p>	<p>Yes</p> <p>Not Yet</p>		
<p><b>The plan for progress monitoring allows for the collection of baseline data and any assessments prior to implementation.</b></p> <p><i>15 points</i></p>	<p>Yes</p> <p>Not Yet</p>		
<p><b>There is a clear collaboration plan to support the student(s) receiving the intervention with key stakeholders.</b></p> <p><i>25 points</i></p>	<p>Yes</p> <p>Not Yet</p>		
<p><b>The paper is professionally composed and includes current peer reviewed sources.</b></p> <p><i>20 points</i></p>	<p>Yes</p> <p>Not Yet</p>		