



## COUN XXXX | CLINICAL APPLICATION OF NEUROSCIENCE | SPRING 2026

### INSTRUCTOR CONTACT INFORMATION

**Instructor:** Robert Dylan Campbell LIMHP, LPC  
**Contact:** robertcampbell@unomaha.edu  
**Office Hours:** Virtual Office Hours by Appointment  
**Meeting day/time:** TBA

### PREREQUISITES

COUN XXXX

### COURSE DESCRIPTION AND CONTENT AREAS

#### COURSE DESCRIPTION

This course bridges neuroscience research with clinical counseling practice. Students will learn to translate brain, nervous systems, and biological components into assessment, case conceptualization, intervention, and client education. Topics include neurobiology of motivation, dopamine, neuroplasticity, and the neuroscience of trauma, anxiety, depression, ADHD, and substance use. Each week includes experiential labs, topic analysis, and skill-building activities to prepare students for ethical, culturally responsive integration of neuroscience into counseling.

#### COURSE OBJECTIVES

- Demonstrate foundational knowledge of brain structures, systems, and functions relevant to counseling practice.
- Apply neuroscience concepts to case conceptualization and intervention planning.
- Critically evaluate neuroscience research,
- Communicate neuroscience concepts clearly and culturally appropriately to clients.
- Integrate neuroscience-informed strategies into work with common mental health concerns.
- Reflect on their professional identity as neuroscience-informed counselors.

#### CONNECTIONS TO CACREP 2024 STANDARDS

Section 2 – Professional Counseling Identity

2.F.1.k – Strategies for personal and professional self-evaluation and implications for practice.

2.F.2.a – Multicultural and pluralistic characteristics within and among diverse groups nationally and internationally.

2.F.3.a – Theories of individual and family development across the lifespan.

2.F.3.e – Biological, neurological, and physiological factors that affect human development, functioning, and behavior.

2.F.3.f – Effects of crisis, disasters, and trauma on diverse individuals across the lifespan.

2.F.5.a – Theories and models of counseling.



- 2.F.5.b – A systems approach to conceptualizing clients.
  - 2.F.5.c – Theories, models, and strategies for understanding and practicing multicultural counseling.
  - 2.F.5.f – Counselor characteristics and behaviors that influence the counseling process.
  - 2.F.5.g – Essential interviewing, counseling, and case conceptualization skills.
  - 2.F.7.i – Analysis of behavioral trends to inform decision making.
  - 2.F.8.a – The importance of research in advancing the counseling profession.
  - 2.F.8.b – Identification of evidence-based counseling practices.
- Clinical Mental Health Counseling Specialty Standards (Section 5.C)
- 5.C.1.g – Impact of biological and neurological factors on mental health.
  - 5.C.2.g – Impact of trauma and crisis on individuals with mental health diagnoses.
  - 5.C.3.b – Techniques and interventions for prevention and treatment of a broad range of mental health issues.

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#### REQUIRED TEXTS

Luke, C. (2020). *Neuroscience for counselors and therapists: Integrating the sciences of mind and brain*. SAGE Publications.

#### SUPPLEMENTAL TEXTS (NOT REQUIRED)

Uhernik, J. A. (2018). *Using neuroscience in trauma therapy*. Routledge.

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#### TECHNICAL REQUIREMENTS

You will need the following to participate in this course:

- Computer
- Reliable internet connection
- Computer camera and microphone (if remote)
- Access to UNO email and Canvas

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#### TECHNICAL SUPPORT

- Information Technology Services Technical Support  
[unohelpdesk@nebraska.edu](mailto:unohelpdesk@nebraska.edu)  
402-554-4347 (HELP)  
Eppley Administration Building, Room 104  
Monday – Friday 8:00 to 5:00 pm



### QUIZES (5) (75 POINTS)

Short assessments consisting of multiple-choice and short-answer questions designed to measure comprehension of assigned readings and class discussions. Quizzes focus on accurate application of neuroscience concepts to counseling contexts and the ability to differentiate evidence-based knowledge from common myths.

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### NEUROSCIENCE-GUIDED METAPHOR (60 POINTS)

Students will create a metaphor, analogy, or visual model to explain a neuroscience concept to clients in a counseling setting. This project emphasizes clarity, creativity, and cultural sensitivity in translating technical brain science into language clients can easily understand. Deliverables should include both the metaphor and a brief written explanation of its therapeutic use.

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### BRAIN STRUCTURE, SYSTEMS, & FUNCTIONS BOOK (80 POINTS)

Students will compile a counseling-friendly reference guide that summarizes key brain structures, systems, and functions, their relevance to mental health concerns, and common myths or misconceptions. The final product should be accessible, visually organized, and practical for use in client psychoeducation or personal professional reference.

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### IN-CLASS DYAD PARTNER PRACTICE (80 POINTS)

Weekly experiential skill-building sessions in which students practice integrating neuroscience-informed interventions into mock counseling scenarios. Dyad work will include role-plays, feedback exchange, and reflective discussion to strengthen both technical accuracy and interpersonal counseling skills. Consistent participation and constructive feedback are essential.

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### REFLECTION PAPER (20 POINTS)

A concise (1–2 page) paper in which students reflect on their learning throughout the course and how they plan to apply neuroscience concepts in their future counseling practice. Emphasis should be placed on personal growth, shifts in professional identity, and anticipated challenges in translating neuroscience to clinical work.

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### FINAL CONCEPTUALIZATION PAPER (40 POINTS)

A 3–4 page written case conceptualization integrating course concepts into the assessment and treatment planning for a hypothetical or composite client. The paper should demonstrate the student's ability to connect neuroscience principles with counseling theory, culturally responsive practice, and ethical decision-making.



**OVERVIEW OF THE ASSIGNMENT GRADES**

Assignment	Points
Quizzes	75
Neuroscience-Guided Metaphor	60
Brain Structure, Systems, & Functions Book	80
In-Class Dyad Partner Practice	80
Reflection Paper	20
Final – Conceptualization Paper	40
<b>Total</b>	<b>355</b>

**GRADING SCALE**

90-100% = A; 80-89%=B; 70-79%=C; 60-69%=D; 00-59%=F

Grade	% Range	Points Range
<b>A</b>	90-100	90-100
<b>B</b>	80-89	80-89
<b>C</b>	70-79	70-79
<b>D</b>	60-69	60-69
<b>F</b>	<60%	Less than 60

**UNIVERSITY POLICIES**

ACCOMMODATIONS

The University of Nebraska at Omaha is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Reasonable accommodations are provided for students who are registered with Accessibility Services Center (ASC) and make their requests sufficiently in advance. For more information, contact ASC (Location: 104 H&K, Phone: 402.554.2872, Email: [unoaccessibility@unomaha.edu](mailto:unoaccessibility@unomaha.edu).)



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## PREGNANT AND PARENTING STUDENTS

Students that are pregnant or parenting may request reasonable accommodations through university procedures. Requests for medically-related accommodations should be made through the Accessibility Services Center (ASC) by contacting them at 402.554.2872, or by emailing at [unoaccessibility@unomaha.edu](mailto:unoaccessibility@unomaha.edu). ASC can also assist with medical supervision, which allows students to regain lost attendance points, makeup assignments, and exams that were missed during excused absences. For all other accommodations, or questions about pregnancy and parenting, please contact the Title IX Coordinator at 402.554.2120 or by email to [sweil@unomaha.edu](mailto:sweil@unomaha.edu). Additional information about pregnancy and parenting can be found on the following links (updated 04/2022):

<https://www.unomaha.edu/office-of-equity-access-and-diversity/title-ix-information/pregnancy-parenting.php>

<http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>

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## ACADEMIC INTEGRITY

Plagiarism and cheating of any kind on an examination, quiz, or assignment will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" for the entire course) and may be subject to appropriate referral to the Office of Academic and Student Affairs for further action. I will assume for this course that you will adhere to the University of Nebraska at Omaha policies and will maintain the highest standards of academic integrity. In other words, don't cheat by giving answers to others or taking them from anyone else. I will also adhere to the highest standards of academic integrity, so please do not ask me to change (or expect me to change) your grade illegitimately or to bend or break rules for one person that will not apply to everyone.

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## TITLE IX SEXUAL MISCONDUCT

As your instructor, one of my responsibilities is to help create a safe learning environment on our campus. Title IX and our own Sexual Misconduct policy prohibit sexual misconduct. If you have experienced sexual misconduct, or know someone who has, the University can help. I encourage you to visit Title IX website to learn more. If you are seeking help and would like to speak to someone confidentially, you can contact the Counseling and Psychological Services (CAPS) or Gender and Sexuality Resource Center.

It is also important that you know that federal regulations and University policy require me to promptly convey any information about potential sexual misconduct known to me to UNO's Title IX Coordinator. In that event, they will work with a small number of others on campus to ensure that appropriate measures are taken, and resources are made available to the student who may have been harmed. Protecting a student's privacy is of utmost concern, and all involved will only share information with those that need to know to ensure the University can respond and assist.

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## CODE OF STUDENT RIGHTS, RESPONSIBILITIES, AND CONDUCT



Students at the University of Nebraska Omaha are expected to maintain standards of personal integrity in accordance with institutional goals for the success of all students. This means students are expected to assume responsibility for their actions; observe national, state, and local laws; follow university policies; and respect the rights and property of all people. For more information see [Student Conduct and Community Standards](#).

## GRADING POLICIES

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### GRADE APPEAL

Individuals who believe that their grade in a particular course does not properly reflect their performance or that the instructor acted in an arbitrary or capricious manner in determining the grade should first contact the instructor to determine the rationale for the grade or if there was an error in reporting. Consultation with the instructor should take place before taking any formal action in regard to a grade appeal.

You will find the Department of Counseling grade appeal policy in the Student Handbook: <https://www.unomaha.edu/college-of-education-health-and-human-sciences/counseling/student-resources/student-handbook-fall-2022.pdf>

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### DROPPING A COURSE

A class can be dropped from your schedule via MavLINK up until the last day to withdraw. The last day to withdraw can be found on the [Academic Calendar](#). If you are currently enrolled, you can click on the "refund" link next to each class in your schedule. You can also contact the Office of the University Registrar to verify the last day to withdraw.

Drops can only be completed in the 100% refund period of your course. If you drop the course from your schedule during this period, it will not be listed on your academic transcript.

Withdraws can be completed up until the last day to withdraw for the semester. If you withdraw from a course, a grade of "W" is given for that course, and this will be listed on your academic transcript. "W" grades have no impact on your academic GPA.



## COURSE EXPECTATIONS

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### CLASSROOM CIVILITY

It is important to build a classroom climate that is welcoming and safe for everyone. Please display respect for everyone in the class. You should avoid racist, sexist, homophobic, or other negative language that may exclude members of our campus and classroom community.

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### CEHHS DIVERSITY, EQUITY, ACCESS, AND INCLUSION STATEMENT:

We respect the worldviews of racially and ethnically diverse individuals and encourage multiple perspectives in fostering a global community dedicated to teaching, learning, service, and scholarly activity, while actively engaging in antiracist and inclusive practices. The College of Education, Health and Human Sciences is dedicated to ensuring that all individuals have access to the resources, support, and opportunities to succeed in their academic and professional careers. Through its faculty, staff, community partners, strategic plan, curricular, and extra-curricular offerings, the College is committed to preparing our students to engage equitably with all persons regardless of race, ethnicity, cultural beliefs, socioeconomic status, geographical perspective, gender identity and expression, age, religion, sexual orientation, or other identities. (Adopted August 2020)

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### PROFESSIONAL COMMUNICATION

It is expected that professionalism will be utilized in all written and oral communications with clients, peers, instructors, and supervisors throughout the duration of the semester.

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### PROFESSIONALISM/PRESERVING CONFIDENTIALITY

This course is part of a professional degree program, students are counselors in training, and thus professionalism is always expected, whether a student is in class or recording a session with a client. Client confidentiality and the content of sessions both in and out of class are crucial elements of ethical conduct.

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### SELF-DISCLOSURES AND LIMITS TO CONFIDENTIALITY

The nature of the practicum and clinical supervision experience dictates that students routinely share personal information about themselves in discussing their countertransference and reactions to clients. It is expected that the practicum cohort will function as a confidential group: personal information shared within the group is to remain within the group. That said, confidentiality on the part of your peers cannot be guaranteed by your instructor (like a therapy group). Please uphold the ethics of our profession in this regard.

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### PARTICIPATION AND ABSENCE

This class operates in a graduate seminar format, where everyone is expected to attend regularly and actively engage. Absences and lack of class readiness will lower the final grade in this



course. Class participation expectations include constructive feedback for peers, self-reflection, and overall attendance and punctuality.

INCLEMENT WEATHER

University-designated weather closures will be communicated through official university emails and text messages. If the university closes for inclement weather, the Community Counseling Clinic is also closed. Students are responsible for communicating this to scheduled clients that will be impacted by closures. Zoom sessions are also not permitted during designated university weather-related closures.

INSTRUCTIONAL CONTINUITY PLAN

If in-person classes are cancelled (e.g., in the unlikely event of a recurring pandemic), you will be notified of the instructional continuity plan for this class by email through Canvas. If in-person classes are cancelled, we will likely meet over Zoom. Should clinical activities be impacted by severe weather (or other unforeseen circumstances), your instructor will communicate changes accordingly.

FAIR USE POLICY

Copying or recording synchronous classes and course materials without prior instructor approval is prohibited. All copies and recordings remain the property of UNO and your instructor. UNO and your instructor reserve the right to retrieve, inspect, or destroy the copies and recordings after their intended use. These policies are not intended to affect the rights of students with disabilities under applicable law or UNO policies.

RIGHT OF REVISION

The instructor reserves the right to revise or adjust the course syllabus to best accommodate the pace and needs of the students.

**COURSE WEEKLY SCHEDULE**

Date	Topic	Assignments	Assignment Due
<b>Week 1</b> <b>Jan. 22 - 28</b>	Introduction & Relevance to Counseling  Experiential Activity: Role-play: explaining 'why talk about the brain' to clients		





<b>Date</b>	<b>Topic</b>	<b>Assignments</b>	<b>Assignment Due</b>
<b>Week 2</b> <b>Jan. 29 – Feb. 4</b>	Introduction to Neuroscience for Counselors Experiential Activity: Brain model puzzle The Name Game	Readings: Luke Ch. 1;	
<b>Week 3</b> <b>Feb. 5 - 11</b>	Evolutionary Psychology & Anthropological Insight Experiential Activity: Group analysis of modern mental health challenges Can you Apply It?	Readings: Luke Ch. 2;	<b>Quiz 1 Due</b>
<b>Week 4</b> <b>Feb. 12 - 18</b>	Neurochemistry & Dopamine Response Experiential Activity: Rubicon Model - Dopamine Dyadic Practice: Dopamine Need vs Avoidance	Readings: Luke Ch. 3;	
<b>Week 5</b> <b>Feb 19 - 25</b>	Neuroplasticity & Habit Formation Experiential Activity: 30-day neuroplasticity plan Dyadic Practice: Routines and Habits	Readings: Luke Ch. 4;	<b>Quiz 2 Due</b>
<b>Week 6</b> <b>Feb. 26 – March 4</b>	Motivation & the Brain Experiential Activity: Intrinsic Vs Extrinsic Dyadic Practice: Motivation vs Stagnation Rewire	Readings: Luke Ch. 10;	
<b>Week 7</b> <b>March 5 - 11</b>	Addiction & Substance Use Experiential Activity: Craving cycle mapping Dyadic Practice: Reward vs Discomfort	Readings: Luke Ch. 9;	<b>Quiz 3 Due</b>



Date	Topic	Assignments	Assignment Due
<b>Week 8</b> <b>March 12 - 18</b>	Trauma & Stress Responses Experiential Activity: Grounding techniques with rationale Dyadic Practice: The Response	Readings: Luke Ch. 7;	<b>Neuroscience-Guided Metaphor Due</b>
<b>Week 9</b> <b>March 19 - 25</b>	Anxiety Disorders Experiential Activity: Exposure hierarchy creation Dyadic Practice: Nervous System Discussions	Readings: Luke Ch. 8;	<b>Quiz 4 Due</b>
<b>Week 10</b> <b>March 26 – April 1</b>	<i>SPRING BREAK</i>		
<b>Week 11</b> <b>April 2 - 8</b>	Depression Experiential Activity: Behavioral activation planning Dyadic Practice: Internal Dialogue Changes		
<b>Week 12</b> <b>April 9 - 15</b>	ADHD Experiential Activity: Environmental modification design Dyadic Practice: Executive Function and Emotional Regulation	Readings: Luke Ch. 6;	<b>Brain Structure, Systems, &amp; Functions Book Due</b>
<b>Week 13</b> <b>April 16 - 22</b>	Theory Integration Experiential Activity: Match theories to neuroscience	Readings: Luke Ch. 5;	<b>Quiz 5 Due</b>



Date	Topic	Assignments	Assignment Due
	Dyadic Practice: Apply to Personal Theory		
<b>Week 14</b> <b>April 23 - 29</b>	Communication Skills Experiential Activity: Two-Minute Teach Back Dyadic Practice: The Absolutes		
<b>Week 15</b> <b>April 30 – May 6</b>	Grey Zones & Myths Symposium Experiential Activity: Student-led discussion Grey Zone/Myth: Various myths		
<b>Week 16</b> <b>May 7 - 13</b>	Final Integration & Reflection Experiential Activity: Peer discussion of reflections		Final - Integration Paper Due Reflection Paper Due



## Reference

### Books

- Field, T. A., Jones, L. K., & Russell-Chapin, L. A. (2022). *Neuroscience-informed counseling* (2nd ed.). American Counseling Association.
- Luke, C. (2020). *Neuroscience for counselors and therapists: Integrating the sciences of mind and brain*. SAGE Publications.
- Russell-Chapin, L. A., & Chapin, T. J. (2016). *Neurocounseling: Brain-based clinical approaches*. Routledge.
- Uhernik, J. A. (2018). *Using neuroscience in trauma therapy*. Routledge.

### Journals

- Abdallah, C. G., Averill, L. A., Akiki, T. J., Raza, M., Averill, C. L., Gomaa, H., Adikey, A., & Krystal, J. H. (2019). The neurobiology and pharmacotherapy of posttraumatic stress disorder (PTSD). *Annual Review of Pharmacology and Toxicology*, *59*, 171–189. <https://doi.org/10.1146/annurev-pharmtox-010818-021701>.
- Field, T. A., Beeson, E. T., Luke, C., Ghoston, M., & Golubovic, N. (2019). Counselors' neuroscience conceptualizations of depression. *Journal of Mental Health Counseling*, *41*(1), 1–19. <https://doi.org/10.17744/mehc.41.1.01>.
- Goss, D. (2021). Integrating neuroscience into counseling psychology: A systematic review of current literature. *The Counseling Psychologist*, *49*(6), 875–906. <https://doi.org/10.1177/0011000016650263>.
- Luke, C., Beeson, E. T., Miller, R., Field, T. A., & Jones, L. K. (2018). Counselors' perceptions of ethical considerations for integrating neuroscience with counseling. *Journal of Mental Health Counseling*, *40*(3), 204–219. <https://doi.org/10.17744/mehc.40.3.04>.
- Miller, R. J. (2020). The impact of neuroscience-informed cognitive-behavior therapy (nCBT) training on clinicians' knowledge. *Journal of Counselor Practice*, *11*(1), 45–57. <https://research.library.kutztown.edu/jcps/vol11/iss1/4>.
- Perricone, A., Bitran, A., & Ahn, W. K. (2024). Explaining How Psychotherapy Affects the Brain Can Increase the Perceived Effectiveness of Psychotherapy: A Randomized Controlled Trial. *Behavior therapy*, *55*(4), 738–750. <https://doi.org/10.1016/j.beth.2023.10.003>.