

CO5640 Neuroscience Informed Counseling
Reformed Theological Seminary
Spring 2024
2 Credit Hours

Instructor

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Office hours:

By appointment

Class meeting time

February 6 – May 7
Tuesdays, 10am-12pm

Course Description

Recent developments in neuroscience have contributed greatly to the field of counseling. Awareness of brain functioning has contributed information that helps clinicians better to understand long established counseling practices and has contributed to new approaches to old problems. This course is designed to introduce you to foundational neuroscience material relevant to counseling, highlighting both the intrapersonal and interpersonal aspects of human development and ongoing functioning. The foundation that you build in this course will provide a framework within which you will learn about the counseling process.

Course Objectives

Students will demonstrate comprehension of the following CACREP standards:

- CO1** Awareness of the function and development of the human brain and the impact of biological and neurological mechanisms on mental health (2.F.3.b,e-g; 5.C.2.g)
- CO2** Awareness of applications of neuroscience information of particular relevance to counseling subjects such as fundamental counseling skills, attachment processes, trauma, self-regulation, and the integration process (2.F.2.d,g; 2.F.3.b,e,g; 5.C.2.g)
- CO3** Ability to research a neuroscience topic relevant to counseling (2.F.2.d; 2.F.3.b,g; 5.C.2.g)
- CO4** Awareness of the relationship of neuroscience to biblical teaching in a variety of areas (2.F.2.d,g)

Methods of Instruction

This course will be taught in the following formats: classroom instruction, video, class presentations, student work groups.

Assignments (Student Performance Evaluation Criteria)

A1. Reflections from *Parenting from the Inside Out* (20%)

Questions for each chapter of this book will be provided for you in an APA template. The questions will ask you to reflect and apply the concepts and issues to your life and/or clinical situations. Due at 11:59pm on the weekly date listed on the course schedule.

A2. Reflections from *Anatomy of the Soul* (20%)

Questions for each chapter of this book will be provided for you in an APA template. The questions will ask you to reflect and apply the concepts and issues to your life and/or clinical situations. Due at 11:59pm on the weekly date listed on the course schedule.

A3. Notes on YouTube Videos (10%)

For each video listed, write out two “take aways” that are applicable to yourself and/or clinical situations in the provided APA template. This paper is due at on May 4th at 11:59pm on Canvas.

A4. Notes on Norden Video Series, Understanding the Brain (20%)

Jeannette Norden is an outstanding, award-winning lecturer. Her course, Understanding the Brain, is for non-specialists and will introduce you to brain science. Her entire series consists of 36 lectures of 31 minutes each. While you are encouraged to view all of them, you are required to view lectures 2-10, 15, 21, 22, 24-28, 30-32, and 35. The Norden videos are available in Canvas in the modules section for this course.

This assignment requires you to view each of the videos listed on the course schedule below. For each video listed, write out five “take aways” that are applicable to yourself and/or clinical situations in the provided APA template. Please complete and upload a separate document for the notes for each lecture to Canvas according to the schedule listed below.

A5. Neuroscience presentation (30%)

Students self-pair into triads to prepare and present a 20-minute presentation on a neuroscience topic related to counseling. Presentations will be made during the last two days of class (April 30th and May 7th).

1. Proposal. After selecting and exploring their topic, triad/dyad members should write a brief a “presentation proposal” for the course instructor. The proposal should include
 - a. A clear statement of the topic.
 - b. An annotated bibliography (a brief descriptive and evaluative paragraph of each citation) of at least 12 recent (from the last 8 years) scholarly articles/chapters/items relevant to the topic.
 - c. A summary statement about the research findings and their relation to the counseling profession.
2. The instructor will review the proposal and approve it or recommend modifications.
3. Class presentation. During the last two days of class, student dyads will make their presentations to the class. Use a PowerPoint for your presentation. The PowerPoint must be uploaded to Canvas as an assignment AND as a discussion (so that other students can reference it).
4. The proposal due date is March 26th by 11:59pm on Canvas.
5. The due date for all presentations, including PowerPoint presentations, is April 30th. The order of presentations will be determined in class.

A6. Course Evaluation (0% of grade but required for course completion)

Course evaluations are crucial for assessing and improving the MAC program. Therefore, each MAC course includes an assignment to complete an anonymous online course evaluation. You will verify whether you have completed the evaluation through a Canvas quiz. This will not count toward your grade but is necessary for successful completion of the course.

Required Materials

- M1.** Siegel, D., & Hartzell, M. (2014). *Parenting from the inside out: How a deeper self-understanding can help you raise children who thrive*. Penguin.
ISBN: 978-0399165108
- M2.** Thompson, C. (2010). *Anatomy of the soul: Surprising connections between neuroscience and spiritual practices that can transform your life and relationships*. Tyndale Momentum. ISBN: 978-414334158
- M3.** Siegel, D. (2012, July 4). *TEDxSunsetPark - Dan Siegel - What is the mind?* [Video file]. Retrieved from <https://www.youtube.com/watch?v=Ak5GCyBFY4E>
- M4.** Siegel, D. (2011, March 3). *Dr. Dan Siegel - On optimal attachment*. [Video file]. Retrieved from https://www.youtube.com/watch?v=_XjXv6zseA0&index=5&list=PLDCtwyPSjhlNEz4xuzxt6Tdsnyt2vChiB
- M5.** Siegel, D. (2011, March 3). *Dr. Dan Siegel - On ambivalent attachment*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=nGhZtUrpCuc>
- M6.** Siegel, D. (2011, March 3). *Dr. Dan Siegel - On avoidant attachment*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=qgYJ82kQIyg&index=4&list=PLDCtwyPSjhlNEz4xuzxt6Tdsnyt2vChiB>
- M7.** Siegel, D. (2011, March 3). *Dr. Dan Siegel - On disorganized attachment*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=rpQtPguhLzc&index=2&list=PLDCtwyPSjhlNEz4xuzxt6Tdsnyt2vChiB>
- M8.** Siegel, D. (2011, March 3). *Disorganized attachment in the making*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=zovtRq4e2E8&list=PLDCtwyPSjhlNEz4xuzxt6Tdsnyt2vChiB&index=1>
- M9.** Panksepp, J. (2014, January 13). *The science of emotions: Jaak Panksepp at TEDxRainier*. [Video file]. Retrieved from https://www.youtube.com/watch?v=65e2qScV_K8
- M10.** Ressler, K. (2012, November 13). *The neuroscience of emotion: Kerry Ressler at TEDxPeachtree 2012*. [Video file]. Retrieved from <https://www.youtube.com/watch?v=a9LjXHtLvIY>
- M11.** Siegel, D. (2009, December 17). *Dr. Dan Siegel- On understanding the brain (mirror neurons)* [Video file]. Retrieved from <https://www.youtube.com/watch?v=V9H1eEXzbPM>
- M12.** Siegel, D. (2012, May 2). *Mindfulness and neural integration: Daniel Siegel, MD at TEDxStudioCityEDn* [Video file]. Retrieved from <https://www.youtube.com/watch?v=LiyaSr5aeho>
- M13.** Siegel, D. (2009, December 17). *Dr. Dan Siegel- On integrating the two hemispheres of*

- our brains. Retrieved from <https://www.youtube.com/watch?v=xPjhfUVgvOQ>
- M14.** Siegel, D. (2015, April 17). *How tech affects your brain and relationships*. [Video file]. Retrieved from https://www.youtube.com/watch?v=31o_chpzQh8
- M15.** Norden, J. *Understanding the brain*, Video series. Retrieved from: <https://www.wondrium.com/understanding-the-brain>.

Course Schedule

	Date	Topic	Reading Due	Assignments Due	CACREP 2016 Standards
L1	2/6/24	Introduction	M15. Norden, 2, 3, 4		2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L2	2/13/24	Gross brain organization Brain lateralization and its social implications	M1. <i>Parenting</i> , ch. 1 M2. <i>Anatomy</i> , ch. 1 M3. Siegel video M11. Siegal video M15. Norden, 5, 6, 7	A1. <i>Parenting</i> reflections, ch. 1 A2. <i>Anatomy</i> reflections, ch. 1	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L3	2/20/24	Brain organization at the molecular, cellular, and structural levels	M1. <i>Parenting</i> , ch. 2 M2. <i>Anatomy</i> , ch. 2 M15. Norden, 8, 9, 10	A1. <i>Parenting</i> reflections, ch. 2 A2. <i>Anatomy</i> reflections, ch. 2	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L4	2/27/24	The limbic system The peripheral nervous system The HPA Axis Stress networks and trauma	M1. <i>Parenting</i> , ch. 3 M2. <i>Anatomy</i> , ch. 3 M15. Norden, 15, 21, 22	A1. <i>Parenting</i> reflections, ch. 3 A2. <i>Anatomy</i> reflections, ch. 3	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L5	3/5/24	Polyvagal Theory	M1. <i>Parenting</i> , ch. 4 M2. <i>Anatomy</i> , ch. 4 M4. to M8. Siegel videos M15: Norden, 27, 28, 35	A1. <i>Parenting</i> reflections, ch. 4 A2. <i>Anatomy</i> reflections, ch. 4	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L6	3/12/24	Polyvagal Theory applied	M1. <i>Parenting</i> , ch. 5 M2. <i>Anatomy</i> , ch. 5 M15: Norden, 24, 25, 26	A1. <i>Parenting</i> reflections, ch. 5 A2. <i>Anatomy</i> reflections, ch. 5	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
	3/19/24	No class, reading week			

L7	3/26/24	Neuroplasticity Learning and memory	M1. <i>Parenting</i> , ch. 6 M2. <i>Anatomy</i> , ch. 6 M15: Norden, 30	A1. <i>Parenting</i> reflections, ch. 6 A2. <i>Anatomy</i> reflections, ch. 6 A5. Neuroscience presenation proposal	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L8	4/2/24	Learning and memory	M1. <i>Parenting</i> , ch. 7 M2. <i>Anatomy</i> , ch. 7 M11. Siegel video M15: Norden, 31	A1. <i>Parenting</i> reflections, ch. 7 A2. <i>Anatomy</i> reflections, ch. 7	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L9	4/9/24	Learning and memory Emotions and feelings	M1. <i>Parenting</i> , ch. 8 M2. <i>Anatomy</i> , ch. 8 M9. Panksepp viedo M10. Ressler video	A1. <i>Parenting</i> reflections, ch. 8 A2. <i>Anatomy</i> reflections, ch. 8	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L10	4/16/24	Emotions and executive functioning	M1. <i>Parenting</i> , ch. 9 M2. <i>Anatomy</i> , ch. 9, 10 M15: Norden, 32	A1. <i>Parenting</i> reflections, ch. 9 A2. <i>Anatomy</i> reflections, ch. 9, 10	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L11	4/23/24	Personal and interpersonal integration	A2. <i>Anatomy</i> , ch.11 M12. to M14. Siegel videos	A2. <i>Anatomy</i> reflections, ch. 11	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L12	4/30/24	Student neuroscience presentations	A2. <i>Anatomy</i> , ch. 12	A2. <i>Anatomy</i> reflections, ch.12 A5. All Presentation Powerpoints due. A5. Presentations	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g
L13	5/7/24	Student neuroscience presentations	A2. <i>Anatomy</i> , ch. 13	A2. <i>Anatomy</i> reflections, ch. 13 A3. Video take aways A4. Notes on Norden videos A5. Presentations	2.F.2.d,g 2.F.3.b,e-g 5.C.2.g

Student Learning Outcome Table

The table below shows how the objectives of this course will be met by readings, lectures and assignments used. Details about specific course objectives, assignments, and evaluation methods can be found in previous sections of this syllabus.

Course Objective	Reading(s)	Lecture(s)	Assignment(s)	CACREP Standard(s)
CO1. Brain function	M1. to M14.	L1. to L13.	A1. to A4.	2.F.3.b 2.F.3.e 2.F.3.f 2.F.3.g 5.C.2.g
CO2. Neuroscience and Counseling Issues	M1. to M14.	L1. to L13.	A1. to A4.	2.F.2.d 2.F.2.g 2.F.3.b 2.F.3.e 2.F.3.g 5.C.2.g
CO3. Explore relevant neuroscience research	Research material for assignment A4.	L11. to L13.	A4.	2.F.2.d 2.F.3.b 2.F.3.g 5.C.2.g
CO4. Neuroscience and biblical teaching	M2	L1., L11.	A1. To A3.	2.F.2.d 2.F.2.g

Policies and Important Information

Written Work Format. All written work must conform to current American Psychological Association (APA) style unless otherwise specified. If a student does not have a copy of the APA manual, one should be purchased, or students may use one of the many APA style websites available online, for example:

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_style_introduction.html.

Assessment will include how well students represent their thoughts on paper, craftsmanship in writing, and organization of all written work.

Disability Accommodation Policy. If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor prior to the start of this course. You must provide a letter from the Dean of Students that verifies your disabled status. The instructor and student will discuss the available accommodations for the course. If the student with a disability does not disclose that s/he has a disability, then the student is agreeing to take full responsibility for any related consequences that may occur.

Access to Research Database. RTS provides MAC students with access to the EBSCOhost *Psychology & Behavioral Sciences Collection* and *APA PsycArticles*. Links to the databases are available from the [RTS library website](#). If logging in from a computer away from the RTS campus, please follow the link below and log in with the username and password provided by the MAC program. <http://search.ebscohost.com/>

Submission of work. All assignments should be submitted on the Canvas course webpage.

Late work. All assignments are due as scheduled regardless of attendance unless prior arrangements are made with the instructor. Assignments turned in late will be deducted 1/3 letter grade for each late day (A lowered to A-, B+ lowered to B).

Return of work. All work will be returned to students via Canvas. Additionally, if students would like additional feedback, they may set up time before or after class to meet with the professor.

Grading Scale

A (97-100)	B- (86-87)	D+ (75-77)
A- (94-96)	C+ (83-85)	D (72-74)
B+ (91-93)	C (80-82)	D- (70-71)
B (88-90)	C- (78-79)	F (Below 70)

Attendance Policy. Regular attendance is expected and required. Excessive absences (more than 1 class meetings) will result in the loss of points equal to one letter grade per absence. If serious illness or an emergency prevents a student from attending any class, please notify the instructor before the class begins. It is the responsibility of the student to obtain any materials handed out or presented during the missed class from a classmate.

Class Participation. Students are expected to participate in all components of the class. Each student is expected to read all the assigned materials in advance for each class and have prepared written comments and questions for class discussion. Contributions should reflect knowledge of the reading assignments or other sources.

Course Objectives Related to MAC Student Learning Outcomes

Course: CO5640 Neuroscience Informed Counseling

Professor: Scott Coupland, PhD

Campus: Orlando

Date: Spring 2024

MAC Student Learning Outcomes <i>In order to measure the success of the MAC curriculum, RTS has defined the following as the intended outcomes of the student learning process. Each course contributes to these overall outcomes. This rubric shows the contribution of this course to the MAC outcomes.</i>	Rubric ➤ Strong ➤ Moderate ➤ Minimal ➤ None	Mini-Justification
FOUNDATIONS Understands and applies the basic knowledge needed to be an effective counselor including: the history and philosophy of counseling/soul care, a variety of counseling models and theories, ethics and professional standards of practice, and a psychological, biblical and theological framework for counseling/soul care.	Strong	Lecture material, readings, and assignments create a foundational understanding of neurobiological realities.
COUNSELING, PREVENTION, AND INTERVENTION Able to describe and apply the principles of mental and spiritual health, including prevention, intervention, consultation, education, and advocacy, as well as the operation of programs and networks that promote mental health in a cultural/global society.	Strong	Lecture material, readings, and assignments are applied to clinical situations.
DIVERSITY AND ADVOCACY Understands and demonstrates how living in a cultural/global society affects clients who are seeking clinical mental health counseling services, as well as the effects of sin such as racism, discrimination, sexism, power, privilege, and oppression on one's own life and career and those of the client.	Minimal	Lecture material and readings provide an understanding of universal and variable presentations of neurobiological functioning.
ASSESSMENT Understands and applies various models and approaches to clinical evaluation and their appropriate uses, including diagnostic interviews, mental status examinations, symptom inventories, and psychoeducational and personality assessments, and is sensitive to the complications of diagnosis and interpretation of formal and informal evaluation.	Minimal	Lecture material and readings provide categories for assessing neurobiological functioning.
RESEARCH AND EVALUATION Understands and demonstrates the ability to critically evaluate research relevant to the practice of clinical mental health counseling through a biblical worldview.	Strong	Through the readings and the neuroscience presentation.
DIAGNOSIS Knows and applies the principles of the diagnostic process, including differential diagnosis, and the use of current diagnostic tools, such as the current edition of the <i>Diagnostic and Statistical Manual of Mental Disorders (DSM)</i> , and evaluates them through a biblical and theological framework.	Minimal	Through the application of neuroscience concepts to issues like depression and anxiety/fear.
INTEGRATION Integration of biblical & theological concepts with counseling practices.	Strong	Through the Thompson reading, the reflection papers, and the neuroscience presentation.