

**PSYC 9414 Neuropsychology and Psychopharmacology
Fall 2014**

**Kathryn A. Steele, Ph.D., LPC, LMFT
Associate Professor of Psychology and Counseling
Mari Wirfs, RN, PhD, ANP-BC, FNP-BC, CNE**

Mission Statement

The mission of New Orleans Baptist Theological Seminary is to equip leaders to fulfill the Great Commission and the Great Commandments through the local church and its ministries.

Core Values

New Orleans Baptist Theological Seminary highlights five core values: Doctrinal Integrity, Spiritual Vitality, Mission Focus, Characteristic Excellence, and Servant Leadership. While all five core values are emphasized, the primary focus for the 2014/2015 academic year is Spiritual Vitality. Throughout this course students will be encouraged to consider how the core value of “Spiritual Vitality” impacts their ministry as a Christian counselor called to operate in the local church, and in the entire world.

Curriculum Competencies Addressed

- 1. Biblical exposition:** This course challenges students to identify biblical principles that are foundational for evaluating current research in neuropsychology.
- 2. Effective servant leadership:** This course empowers students to adapt a servant position in their work with clients.
- 3. Interpersonal relationships:** This course enhances awareness of the student of the need to be able to use different methodologies with people who have distinctive needs.
- 4. Disciple making:** This course introduces the student to the element of “walking along with” their clients in discovering solutions for their problems.
- 5. Spiritual and character formation:** This course challenges students to stretch their own discipline in learning and evaluating various methodologies to utilize in helping others.

Seminar Description

Neuropsychology studies the structure and function of the brain as they relate to specific psychological processes and behaviors. Psychopharmacology is the study of all pharmacological agents that affect mental and emotional functions. The term is usually applied more specifically to the study and synthesis of drugs used in the control of psychiatric illnesses, namely the antipsychotic, antianxiety, antidepressant, and mood stabilizer medications.

In this course students will examine the theory and practice of neuropsychology and psychopharmacology. Neuropsychology seeks to assess and interpret the relationship between nervous system function, cognition, emotion and behavior; and to apply this knowledge to the design of individualized client interventions. Students will be challenged to explore how neuropsychology and biblical concepts intersect.

Objectives

At the completion of this course, the student will:

1. be able to demonstrate *knowledge* and *comprehension* of
 - A. basic brain structures and functioning
 - B. the roles brain systems play in emotional and behavioral responses.
2. be able to *analyze* and *apply a methodology* to evaluate the effectiveness of psychotropic medications in the life of the client, and possible side effects that may inhibit compliance.
3. increase in ability to *value* the mind/brain controversy and *articulate* a well developed understanding of the mind/brain controversy.

Required Textbooks:

1. Cozolino, Louis (2014). *The neuroscience of human relationships: Attachment and the developing social brain*. New York: W.W. Norton. (If you were in the Reading Colloquium last semester, you have already read this.)
2. *Brain Facts*. These links are to the Society for NeuroScience website that has information to facilitate learning about the brain. It contains information about the structure and functioning of the brain, as well as ongoing research discoveries. I have selected this resource (instead of a book) due to cost, a more defined focus (than many neuropsychology texts) and more up-to-date information. Please explore these links, and utilize this site in your preparation for class. You will be required to read the entire *Brain Facts* book, which you can download free from this site. You may need to copy and paste the link into your search bar.

Brain Facts book (free download):

<http://www.brainfacts.org/~media/Brainfacts/Article%20Multimedia/About%20Neuroscience/Brain%20Facts%20book.ashx>

Brain Facts SNF Library listing

<http://www.brainfacts.org/ContentTopicList?Audience={5FBA8871-ED8E-4DC5-8BAA-6A78109EC98A}>

Neuroscience Core concepts

<http://www.brainfacts.org/about-neuroscience/core-concepts/>

3. Fishbane, M .D. (2013). *Loving with the brain in mind: Neurobiology & couple therapy*. New York: W. W. Norton & Company.
4. Jeeves, M. (Ed). (2004). *From cells to souls and beyond: Changing portraits of human nature*. Grand Rapids, MI: Eerdmans Publishing Company.
5. Jennings, T. R. (2013). *The God-shaped brain: How changing your view of God transforms your life*. Downers Grove, IL: InterVarsity Press.
6. McHenry, S. J., Sikorski, A. M., & McHenry, J. (2014). *A counselor's introduction to neuroscience*. New York: Taylor and Francis.

7. Montgomery, A. (2013). *Neurobiology essentials for clinicians: What every therapist needs to know*. New York: W. W. Norton.
8. Newberg, A. (2013). *Principles of neurotheology*. Burlington, VT: Ashgate Publishers.
9. Sinacola, R. S., & Peters-Strickland, T. S. (2012). *Basic psychopharmacology for counselors and psychotherapists* (2nd Ed). Boston, MA: Merrill Counseling.
10. Thompson, C. (2010). *Anatomy of the soul: Surprising connections between neuroscience and spiritual practices that can transform your life and relationships*. Carol Stream, IL: Tyndale House Publishers.
11. Ward, J. (2012). *The student's guide to social neuroscience*. New York: Psychology Press.

Requirements and Grading:	Value of Assignment	Due Date
1. A 10-page paper summarizing beliefs about brain and soul, discussing your agreement and disagreement with assigned authors, as well as other authors. You will need to do further research to support your personal argument. All papers must be in Times New Roman 12pt, and follow APA style. The reference page(s) will be in addition to the 10-page body of the paper.	20%	Sept 19-20
2. Exam testing knowledge of brain structures and functions.	20%	Nov. 14-15
3. Presentation assignments of brain structures (areas or regions of the brain), and emotional/behavioral disorders.	30%	Nov. 14-15
4. Exam of psychopharmacology and impact of psychotropic medications on these regions of the brain.	20%	Dec 5-6
5. Percentage of completion of reading assignment for each book.	10%	Each seminar

Details about Assignments

1. Paper: A 10-page paper summarizing beliefs about brain and soul, discussing your agreement and disagreement with authors read in class, as well as other authors. The student will need to do further research to support his or her personal argument. All papers must be in Times New Roman 12pt, and follow APA style. The reference page(s) will be in addition to the 10-page body of the paper.

2. Exam: This exam will include fill-in-the blank, multiple choice, and listing types of questions to test the student's knowledge of the brain structures and functions.

3. Presentation

A. This presentation should be prepared for a lecture in a master's level counseling Neuropsychology class, covering a specific region of the brain. Students will sign up on Blackboard (Wiki) for a specific region of brain for focus. The sign up will be on a first-come-first-serve basis.

- B. The presentation should cover any emotional/behavioral disorders associated with that brain region.
- C. The presentation will include a ____minute lecture/powerpoint presentation to teach about the assigned region of the brain, including what every therapist needs to know about that region of the brain (functions, problems, conditions affecting that region, individual segments of that region and the functions, treatments and medications related to mental, relational, and emotional health).
- D. The presentation will include any handouts or other resources you would use in teaching, including Powerpoints, and are due with the presentation.
- E. A handout specifically for our class will also be due. This handout should give an organized overview of the information, and be as concise as possible for future reference.
- F. Any resources that would be helpful in discussing these issues with clients should be included.
- G. A discussion of any psychotropic treatments, and/or natural or alternative treatments recommended (for disorders that impact that brain region) should be included, such as how the medication works, and any side effects the therapist needs to be alert to in order to inform clients.
- H. In the last seminar weekend the student will facilitate a discussion of the brain region of focus and how it relates to social relationships.

Brain Regions:

Prefrontal Cortex

Cingulate Gyrus

Basal Ganglia and Insula

Deep Limbic System/Thalamus

Temporal Lobes

Parietal Lobes

Cerebellum

- 4. Exam** of psychopharmacology and impact of psychotropic medications on the regions of the brain. The exam may include multiple choice, fill in the blank, and listing types of questions.
- 5. Reading Report.** At each weekend seminar the student will turn in a reading report to verify the percentage of each book read due for that class period.

General Seminar Schedule:

Phone Conference: Friday Aug 15, 1:00 - 2:00 pm (CST). Any student who cannot meet on Friday will need to inform Dr. Steele no later than Friday, Aug.8. If there are any students who cannot participate in the phone conference Friday, there will be an alternative phone conference on Saturday, 8 am. (CST). The phone conference will be conducted via Google Hangout. Each student will be responsible to have an account with Google Hangout, and to have any equipment necessary for the phone conference (microphone, ear phones, etc.).

Sept. 19-20 Seminar Meeting #1

Read books assigned for this meeting (report on percentage read):

Jeeves
Jennings
Newberg

In class video: Daniel Amen, “The Brain and Behavior.”

Assignment Due:

7-10 page paper summarizing beliefs about brain and soul, discussing your agreement and disagreement with authors we read, as well as other authors. You will need to do further research to support your personal argument. All papers must be in Times New Roman 12pt, and follow APA style. Each student will present (in seminar, verbally) major thoughts from his or her paper, an organized outline of how you approach this topic, what authors you included, and why, as well as a concise summary of your belief about the brain and soul.

Nov 14-15 Seminar Meeting #2

Read books assigned for this meeting (report on percentage read):

Brain Facts
Cozolino
McHenry
Montgomery

Assignments:

Exam testing knowledge of brain structure and functions.

Presentation assignments of various brain structures (areas or regions of the brain)

Regions:

Prefrontal Cortex

Cingulate Gyrus

Basal Ganglia and Insula

Deep Limbic System/Thalamus

Temporal Lobes

Parietal Lobes

Cerebellum

Seminar Meeting #3

Read books assigned for this meeting:

Fishbane
Thompson
Ward

The seminar will include a discussion of various brain structures/regions and how social relationships impact and are impacted by those structures/regions. Each student will focus on his or her previously assigned brain region and be prepared to lead a discussion about that brain region related to social relationships. A discussion of psychopharmacology and impact of medicines on interpersonal issues will be included.

Exam testing knowledge of psychotropic drugs most commonly used for specific disorders.

Selected Bibliography

Alston, B. C. (2007). *What is neurotheology?* Charleston, SC: BookSurge Publishing.

Andreasen, N. (2001). *Brave new brain: Conquering mental illness in the era of the genome* New York: Oxford University Press.

Atkinson, B. J. (2005). *Emotional intelligence in couples therapy: Advances from neurobiology and the science of intimate relationship*. New York: W. W. Norton.

Badenoch, B. (2008). *Being a brain-wise therapist*. New York: W. W. Norton.

Beauregard, M., & O'Leary, D. (2007). *The spiritual brain: A neuroscientist's case for the existence of the soul*. New York: Harper Collins Publishers.

Cozolino, L. (2014). *The neuroscience of human relationships: Attachment and the developing social brain*. New York: W. W. Norton.

Cozolino, L. (2014). *The Neuroscience of psychotherapy* (2nd ed.). New York: W. W. Norton.

Fishbane, M. D. (2013). *Loving with the brain in mind: Neurobiology & couple therapy*. New York: W. W. Norton.

Jeeves, M. (Ed). (2004). *From cells to souls and beyond: Changing portraits of human nature*. Grand Rapids, MI: Eerdmans Publishing Company.

Jennings, T. R. (2013). *The God-shaped brain: How changing your view of God transforms your life*. Downers Grove, IL: InterVarsity Press.

Kolb, B., & Whishaw, I. Q. (2012). *An introduction to brain and behavior* (4th ed.). New York: Worth Publishers.

Kolb, B., & Whishaw, I. Q. (2009). *Fundamentals of human neuropsychology*. New York: Worth Publishers.

Levine, P. A. (1997). *Walking the tiger: Healing trauma*. Berkeley, CA: North Atlantic Books.

- McHenry, S. J., Sikorski, A. M., & McHenry, J. (2014). *A counselor's introduction to neuroscience*. New York: Taylor and Francis.
- Howard, P.J. (2006). *The owner's manual for the brain: Everyday applications from mind-brain research*. Austin, TX: Bard Press.
- Lucas, M. (2012). *Rewire your brain for love: Creating vibrant relationships using the science of mindfulness*. New York: Hay Horse, Inc.
- Montgomery, A. (2013). *Neurobiology essentials for clinicians: What every therapist needs to know*. New York: W. W. Norton.
- Newberg, A. (2013) *Principles of neurotheology*. Burlington, VT: Ashgate Publishers.
- Newberg, A., & Waldman, M. (2006). *Born to believe*. New York: Free Press.
- Newberg, A., & D'Aquili, E. (2001). *Why God won't go away*. New York: Ballantine Books.
- Newberg, A., & Waldman, M. (2006). *Why we believe what we believe*. New York: Free Press.
- O'Neal, J., Preston, J., & Talaga, M. (2013). *Handbook of clinical psychopharmacology for therapists* (2nd ed.). Oakland, CA: New Harbinger Publications.
- Sinacola, R.S., & Peters-Strickland, T.S. (2012). *Basic psychopharmacology for counselors and psychotherapists* (2nd ed.). Boston: MA.: Merrill Counseling Pearson Education.
- Sousa, D. (2011). *How the brain learns* (3rd ed.). Thousand Oaks, CA: Corwin Press.
- Thompson, C. (2010). *Anatomy of the soul: Surprising connections between neuroscience and spiritual practices that can transform your life and relationships*. Carol Stream, IL: Tyndale House Publishers.
- Ward, Jamie. (2012). *The student's guide to social neuroscience*. New York: Psychology Press: Taylor & Francis Group.