

# On-Campus Course Syllabus PSY 305 L00.A Introduction to Neuroscience Spring 2022

#### **Class Information**

Day and Time: Mondays 8:00am to 10:45am

Room Number: E210

#### **Contact Information**

Instructor Name: Steve Hunter

Instructor Email: shunter@criswell.edu

**Instructor Phone:** 214-818-1371

Instructor Office Hours: Tuesdays and Thursdays 9am to 11am

## **Course Description and Prerequisites**

A study of the neuroanatomical, neurophysiological, and neurochemical structures and processes that impact thought, emotion, and behavior. Discussions of dualism and the mind/brain connection are used to challenge and strengthen the student's Christian worldview of mental illness and spirituality. (Prerequisite: PSY 101)

# **Course Objectives**

- Examine the basic foundations, principles, and concepts related to neuroscience and how it has impacted today's society.
- Understand how neurons function as cells and how they communicate with other neurons, and other major aspects of the brain.
- Identify how the brain integrates information from the rest of the body and from the external environment.
- Integrate knowledge and understanding of neuroscience into other major counseling theories.
- Apply theories and principles of neuroscience into everyday cognitive, behavioral, relational, and spiritual issues.

## **Required Textbook**

Luke, C. (2020). *Neuroscience for counselors and therapists: Integrating the sciences of the mind and brain* (2<sup>nd</sup> Ed.). San Diego, CA: Cognella. ISBN 9781516530977

## **Recommended Textbooks**

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 Momentum. ISBN 9781414334158

van der Kolk, B. (2015). *The body keeps the score: Brain, mind, and body in the healing of trauma*. New York, NY: Penguin Books. ISBN 978-0143127741

#### **Course Requirements and Assignments**

- 1. Twenty-five percent (25%) of the student's semester grade will depend upon the completion of a Mid-Term exam. The first section of the exam will test knowledge of psychological terms and definitions. The second section of the exam will test understanding and synthesis.
- 2. Twenty-five percent (25%) of the student's grade will depend upon the completion of a Comprehensive Final Exam. Once again, the first section of the exam will test knowledge of psychological terms and definitions. The second section of the exam will test understanding and synthesis.
- 3. Twenty-five percent (25%) of the student's grade will depend on the completion of a Research Paper and associated Class Presentation. First, the student will write a Research Paper on a topic related to Neuroscience. Students must choose a topic within the first three weeks of class and submit the topic to the Professor and Teaching Assistant, Kiley Parish (parish15082@student.criswell.edu) for approval. Students can use the required textbook and recommended books as sources, if appropriate. The research paper should have a minimum of 5 sources total. These sources are to be books and reputable journal articles (as opposed to "research" retrieved from the internet). The body of the paper will be approximately six to eight double-spaced pages, according to APA Style and Format. This does not include a Title Page and Reference Page. Students who are not psychology majors do not need to adhere to APA Style and Format but must write their paper in a recognizable writing format that is most familiar to them, i.e., Criswell Style and Format, Turabian, etc.

A sample paper and detailed instructions for APA Style and Format can be viewed at the following link:

https://owl.english.purdue.edu/owl/resource/560/01/

When writing and organizing the paper, the student is to create and maintain a basic structure according to APA style. Hence, the following structure and associated questions are important to keep in mind:

a. Introduction: \_\_\_\_\_\_ (15 pts.) Does the paper have a clear introduction? For example, does the paper address current statistics, current events, and current research regarding the topic in order to appropriately introduce and grab the reader's attention? Does the writer identify a purpose statement and main objectives for the writing assignment?
b. Body of the Text: \_\_\_\_\_\_ (30 pts.) Does the paper address the most important dimensions and key concepts regarding the topic? Are sources cited throughout the body of the paper according to APA style? Does the student link together the author's thoughts in a clear manner without using first person, instead using third person? Does the student use at least five sources—either reputable books or journal articles as opposed to "research" cut and pasted from online? Does the body of the paper flow in a logical fashion using effective transition sentences to link the paragraphs together?
c. Conclusion and Implications for the Profession: \_\_\_\_\_ (15 pts.) Did the student provide a summary of the main points, and practical suggestions/implications for counselors, teachers, and/or

ministers? Did the student summarize the key insights, principles, and identify practical steps and

| interventions?  | In other words,  | does the student | adequately and | d effectively | answer the | "So what?" |
|-----------------|------------------|------------------|----------------|---------------|------------|------------|
| question for th | is Research Proj | ect?             |                |               |            |            |

- d. Grammar and Style \_\_\_\_\_(10 Pts.) Are the sentences complete as opposed to fragmented sentences? Are their few grammatical mistakes? Are there spelling mistakes? Is there a title page, abstract, and Reference page? Is the paper written in 3rd person? Is the paper according to APA style or a recognizable style for non-psychology majors?
- e. Presentation \_\_\_\_\_ (30 Pts.) Did the student identify the highlights and main insights for the topic? Was the presentation interesting and creative? Did the presentation finish and end in a timely fashion (20 to 30 minutes with a time for questions)? Was there a PowerPoint and handout? Did the presenter handle the questions from the class in an effective manner? Was the written portion of this Research Paper submitted in a timely fashion?

The following two rubrics will also be used to score the research paper:

- https://www.rcampus.com/rubricshowc.cfm?code=Z99W78&sp=yes& (APA Style Rubric)
- http://assessment.arizona.edu/sites/default/files/CriticalThinking.pdf (Critical Thinking Rubric)
- 4. Twenty five percent (25%) of the student's grade will depend on regular class attendance, class participation, and 5 quiz grades throughout the course of the semester. Some of the quizzes will be unannounced to encourage class attendance and to encourage students to stay up with their assigned reading requirements. In addition, a final class attendance and participation grade will be worth one quiz grade (Quiz #5). This subjective grade will be assessed at the conclusion of the semester. Hence, in order for students to receive full credit for this requirement, students must not only attend class they must also participate in class.
- 5. Finally, it is important to note that no late work will be accepted. It is the student's responsibility to fulfill all requirements for the course in a timely fashion.

# **Course/Classroom Policies and Information**

Students in this class will be allowed 2 excused absences. However, beyond these two excused absences, a third absence (unexcused) will result in the loss of a letter grade for the course. A fourth absence (unexcused) will result in a failing grade of "F" for the course. No late work will be accepted. It is the responsibility of the student to ensure all required work is turned in on time.

In addition, the Professor works closely with the Student Success Manager. Names of students who have two consecutive absences, low grades, missing assignments or who may be experiencing challenging circumstances during the semester will be shared confidentially with the Student Success Manager. The purpose is to provide help, appropriate resources, support, and guidance for those who may be struggling.

#### **Class Attendance**

Students are responsible for enrolling in courses for which they anticipate being able to attend every class session on the day and time appearing on course schedules, and then making every effort to do so. When unavoidable situations result in absence or tardiness, students are responsible for acquiring any information

missed. Instructors are not obliged to allow students to make up missed work. Per their independent discretion, individual instructors may determine how attendance affects students' ability to meet course learning objectives and whether attendance affects course grades.

# **Campus Closure**

To ensure the health and safety of students and employees, college administrators may decide it is necessary on rare occasions to close the campus. Once this decision is announced, instructors will contact students to provide further details regarding the campus closure's impact on those courses. Students are responsible to watch for communication from their instructors and respond appropriately. (Unless otherwise specified by the instructor in this syllabus, this communication will be sent to the student's Criswell College e-mail account.)

In order to make progress toward the courses' objectives, instructors have the freedom during most campus closures to require students to participate in activities as alternatives to meeting on campus. An instructor may, for example, hold class remotely (through Zoom) at the scheduled time, provide a recording of a class or presentation for students to watch independently, or assign other activities that students are to accomplish before returning to campus. Students are responsible for accomplishing these alternative activities as well as any course requirements listed in this syllabus during the period of the campus closure. If, during the period of the campus closure, personal circumstances prohibit a student from accomplishing these alternative activities or course requirements and assignment listed in the syllabus during the campus closure, the student is responsible for communicating with the instructor as soon as possible. Instructors will not penalize students who do not have the means to accomplish the alternative activities during the period of the campus's closure and will work with students whose circumstances during the campus closure prohibited their timely completion of course requirements and assignments in the syllabus.

# **Grading Scale**

| Α  | 93-100 | 4.0 grade points per semester hour |
|----|--------|------------------------------------|
| A- | 90-92  | 3.7 grade points per semester hour |
| B+ | 87-89  | 3.3 grade points per semester hour |
| В  | 83-86  | 3.0 grade points per semester hour |
| B- | 80-82  | 2.7 grade points per semester hour |
| C+ | 77-79  | 2.3 grade points per semester hour |
| С  | 73-76  | 2.0 grade points per semester hour |
| C- | 70-72  | 1.7 grade points per semester hour |
| D+ | 67-69  | 1.3 grade points per semester hour |
| D  | 63-66  | 1.0 grade point per semester hour  |
| D- | 60-62  | 0.7 grade points per semester hour |
| F  | 0-59   | 0.0 grade points per semester hour |

#### **Incomplete Grades**

Students requesting a grade of Incomplete (I) must understand that incomplete grades may be given only upon approval of the faculty member involved. An "I" may be assigned only when a student is currently passing a course and in situations involving extended illness, serious injury, death in the family, or employment or government reassignment, not student neglect.

Students are responsible for contacting their instructors prior to the end of the semester, plus filing the appropriate completed and approved academic request form with the Registrar's Office. The "I" must be removed (by completing the remaining course requirements) no later than 60 calendar days after the close of the term or semester in which the grade was awarded, or the "I" will become an "F."

# **Academic Honesty**

Absolute truth is an essential belief and basis of behavior for those who believe in a God who cannot lie and forbids falsehood. Academic honesty is the application of the principle of truth in the classroom setting. Academic honesty includes the basic premise that all work submitted by students must be their own and any ideas derived or copied from elsewhere must be carefully documented.

Academic dishonesty includes, but is not limited to:

- cheating of any kind,
- submitting, without proper approval, work originally prepared by the student for another course,
- plagiarism, which is the submitting of work prepared by someone else as if it were his own, and
- failing to credit sources properly in written work.

#### **Institutional Assessment**

Material submitted by students in this course may be used for assessment of the college's academic programs. Since programmatic and institutional assessment is done without reference to specific students, the results of these assessments have no effect on a student's course grade or academic standing at the college. Before submitting a student's work for this type of assessment, the course instructor redacts the work to remove anything that identifies the student.

# **Institutional Email Policy**

All official college email communications to students enrolled in this course will be sent exclusively to students' institutional email accounts. Students are expected to check their student email accounts regularly and to respond in an appropriate and timely manner to all communications from faculty and administrative departments.

Students are permitted to setup automatic forwarding of emails from their student email accounts to one or more personal email accounts. The student is responsible to setup and maintain email forwarding without assistance from college staff. If a student chooses to use this forwarding option, he/she will continue to be responsible for responding appropriately to all communications from faculty and administrative departments of the college. Criswell College bears no responsibility for the use of emails that have been forwarded from student email accounts to other email accounts.

#### **Disabilities**

Criswell College recognizes and supports the standards set forth in Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and similar state laws, which are designed to eliminate discrimination against qualified individuals with disabilities. Criswell College is committed to making reasonable accommodations for qualifying students, faculty, and employees with disabilities as required by applicable laws. For more information, please contact the Student Services Office.

## **Intellectual Property Rights**

Unless otherwise specifically instructed in writing by the instructor, students must neither materially nor digitally reproduce materials from any course offered by Criswell College for or with the significant possibility of distribution.

## **Resources and Supports**

<u>Canvas and SONIS</u>: Criswell College uses Canvas as its web-based learning tool and SONIS for student data. Students needing assistance with Canvas should contact the Canvas Help Support line at (844) 358-6140. Tech support is available at this number, twenty-four hours a day. Students needing help with SONIS should contact the Campus Software Manager at studenttechsupport@criswell.edu.

<u>Student Services:</u> The Student Services Office exists to foster and encourage success in all areas of life—physical, intellectual, spiritual, social, and emotional. Students are encouraged to reach out for assistance by contacting the office at 214.818.1332 or <u>studentservices@criswell.edu</u>. Pastoral and certified counseling services are also available to Criswell students. Appointments are scheduled through the Dean of Students, at <u>deanofstudents@criswell.edu</u>.

<u>Wallace Library</u>: Students can access academic resources and obtain research assistance by contacting or visiting the Wallace Library, which is located on campus. For more information, email the Wallace Library at <a href="mailto:library@criswell.edu">library@criswell.edu</a>. Offsite login information is available in Canvas in the "Criswell Student Training Course" under "Library Information."

<u>Tutoring Center</u>: Students are encouraged to consult with tutors to improve and enhance their skills and confidence in any subject matter taught at the college. Tutors have been recommended by the faculty to ensure that the tutor(s) are qualified to serve the student body. Every tutor brings experience and expertise in an effort to provide the proper resources for the subject matter at hand. To consult with a tutor, students can visit the Tutoring Center located on the second floor in room E203, or schedule an appointment by emailing <a href="mailto:tutoringcenter@criswell.edu">tutoringcenter@criswell.edu</a> or by calling 214.818.1373.

# **Course Outline/Calendar**

|      | Date    | Learning Opportunities                               |
|------|---------|--|
| Week |         |  |
| 1    | 1/17    | MLK Day  |
| 2    | 1/24    | Introductions, Syllabus Review                       |
|      |         | Neuroscience: A Starting Point                       |
| 3    | 1/31    | Navigating Neuroscience (Luke, Chapter 1)            |
| 4    | 2/7     | Structures, Systems, and Functions (Luke, Chapter 2) |
|      |         | Quiz 1 Structures and Functions                      |
| 5    | 2/14    | Anxiety and Neuroscience (Luke Chapter 7)            |
| 6    | 2/21    | Anxiety and Neuroscience (cont'd)                    |
|      |         | Quiz 2   |
| 7    | 2/28    | Depression and Neuroscience                          |
|      |         | (Luke Chapter 8)                                     |
|      |         | Review for Midterm Exam                              |
| 8    | 3/7     | Midterm Exam   |
| 9    | 3/14-18 | Spring Break   |
| 10   | 3/21    | Depression and Neuroscience (cont'd)                 |
|      |         | (Luke, Chapter 8)                                    |
|      |         | Quiz 3   |
| 11   | 3/28    | Trauma and Neuroscience                              |
|      |         | (Luke Chapter 9)                                     |
| 12   | 4/4     | Addiction and Neuroscience                           |
|      |         | (Luke Chapter 10)                                    |
| 13   | 4/11    | Depression, Anxiety and Suicide Presentation         |
|      |         | Quiz 4   |
| 14   | 4/18    | Research and Writing Day                             |
| 15   | 4/25    | Written Portion of Research Project is Due           |
|      |         | Student Presentations                                |
| 16   | 5/2     | Written Portion of Research Project is Due           |
|      |         | Student Presentations                                |
|      |         | Review for Final Exam                                |
| 17   | 5/9-13  | Final Exams  |

# **Selected Bibliography**

Azevedo, F. A., Carvalho, L. R. B., Grinberg, L. T., Farfel, J. M., Ferretti, R. E., Leite, R. E., Herculano-Houzel, S. (2009). Equal numbers of neuronal and nonneuronal cells make the human brain an isometrically scaled-up primate brain. *Journal of Comparative Neurology*, *513*, 532–541.

Badenoch, B. (2017). *The heart of trauma: Healing the embodied brain in the context of relationships*. New York, NY: W. W. Norton & Company.

- Bezerow, A. (2012). Why Psychology Isn't a Science. LA Times.
- Garrett, B. & Hough, G. (2018). *Brain and behavior: An introduction to biological psychology* (5th ed.). Thousand Oaks, CA: Sage.
- Griggs, R. (2016). Psychology: A concise introduction (5th ed.) New York, NY: Worth Publishers.
- Güntürkün, O., & Ocklenburg, S. (2017). Ontogenesis of lateralization. Neuron, 94(2), 249–263. doi. org/10.1016/j.neuron.2017.02.045
- Henriques, G. (2016). The "Is Psychology a Science?" debate: Reviewing the ways in which psychology is and is not a science. *Psychology Today*.
- Kalat, J. (2019). Biological psychology (13th ed.). Belmont, CA: Cengage.
- LeDoux, J. (2002). Synaptic self: How our brains become who we are. New York, NY: Penguin Books.
- Luke, C. (2020). *Neuroscience for counselors and therapists: Integrating the sciences of the mind and brain* (2<sup>nd</sup> Ed.). San Diego, CA: Cognella.
- Mahler, D. A., Cunningham, L. N., Skrinar, G. S., Kraemer, W. J., & Colice, G. L. (1989). Beta-endorphin activity and hypercapnic ventilatory responsiveness after marathon running. *Journal of Applied Physiology*, 66, 2431–2436.
- Pert, C. B., & Snyder, S. H. (1973). Opiate receptors: Demonstration in the nervous tissue. *Science*, 179, 1011–1014.
- Rapport, R. (2005). Nerve endings: The discovery of the synapse. New York: W. W. Norton.
- 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 Momentum.
- Van der Kolk, B. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma*. New York, NY: Penguin.