

# Neurological/Biological Bases of Behavior

## PSY 515-01E (Doctoral Students)

Spring 2019; T: 4:30p – 7:10p

Henderson Hall – 206

Instructor: Dr. Benton H. Pierce

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**Benton H. Pierce, Ph.D.**

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**Office Hrs:** Wednesdays 2 – 4 pm, or by appointment

### ***Course Overview.***

The following is the course description in the current graduate catalog: *Designed for psychology or counseling students, this course is concerned with biological bases of developmental neuropsychology, peripheral nervous systems, psychophysiology, behavioral pharmacology, and their relations to central nervous system arousal, motivational, emotional, and memory structures.* Actually, we will cover those topics, along with the basics of sensation and perception, sleep, dreaming, and consciousness, the brain basis of thinking and intelligence, and certain neurological, behavioral, and psychiatric disorders. In addition, we will learn the tools with which we study the structures and functions of the brain.

### ***Class Materials.***

**Text:** *An Introduction to Brain and Behavior* (5<sup>th</sup> ed.), (2016). Kolb, B, Wishaw, I. Q., & Teskey, G. C. ISBN-13: 978-1-4641-0601-9.

## ***Evaluation.***

**Exams:** There will be two exams in this course, including a mid-term exam and a final exam. These exams will be completed outside of class and will be in multiple-choice, short answer, or essay formats (including any combination thereof). I will post the exams in D2L. The exams will be available beginning immediately after class on the day of the scheduled exam, and must be completed and submitted by 5 pm the next day. Each of these exams will comprise 30% of your grade.

**Review paper** – You will be required to submit a review paper of approximately 15 pages (excluding title page and references) by no later than 5:00 p.m. on Wednesday, May 1. This paper will cover an area of the course that you are interested in exploring in some detail. You need to have a topic for your paper by March 5 if possible. This paper will comprise 30% of your course grade.

**Journal Article Summaries** – You will be required to read and summarize two journal articles covering an aspect of the course that you find interesting. Each summary should be approximately five pages in length. The due date for these summaries will be determined soon after the semester begins. Each of the summaries will comprise 5% of your grade.

**Grading System:**   **A = 89.5% - 100%**  
                              **B = 79.5% - 89.4%**  
                              **C = 69.5% - 79.4%**  
                              **D = 59.5% - 69.4%**  
                              **F = Less than 59.5%**

**Note: Grades will not be rounded!**

***Examination Policy.*** Missed exams can only be made up if the student provides documentation of a legitimate University-approved excuse (e.g., medical emergency) within a week of the missed exam.

***Academic Conduct & Honesty.*** The Student Handbook (Policies and Procedures, Code of Student Conduct) University states that “All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” Violation of this code will lead to an initiation of the disciplinary procedures described in the Student Handbook. Proper student conduct also includes maintaining a standard of academic honesty. In essence, **cheating** and **plagiarism** of all forms will not be tolerated. Plagiarism means that you cannot use the words and ideas of another person without giving that person credit. Therefore, quotation marks should be used to indicate the exact words of another. In addition, each time you paraphrase

another author, you must credit the source in the text. If you have questions or concerns about what constitutes cheating or plagiarism, please see me. **Acts of cheating and plagiarism will result in severe consequences, including the possibility of receiving an F in the course.**

***Attendance Policy.*** Because of the considerable amount of material that we will cover in the course, along with the fact that we will be meeting once a week, it is crucial that you do not miss class. If you have legitimate reason to miss a lecture, please let me know ahead of time.

## ***ADA Statement***

### **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

#### ***Office of Student Disability Resources and Services***

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [Rebecca.Tuerk@tamuc.edu](mailto:Rebecca.Tuerk@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### ***Nondiscrimination Notice***

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

## **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

### ***University Specific Procedures***

#### ***Student Conduct***

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf).  
<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette](http://www.albion.com/netiquette/corerules.html)  
<http://www.albion.com/netiquette/corerules.html>

### ***Schedule (Tentative)***

Please note that any changes to this schedule will be announced in class.

<b>Date</b>	<b>Topic</b>	<b>Chapter</b>
Jan. 15	The Nervous System's Functional Anatomy	Chapters 2
Jan. 22	The Nervous System's Functional Units	Chapter 3
Jan. 29	Neurons' Use of Electrical Signals to Transmit Information	Chapter 4
Feb. 5	Communication and Adaptation of Neurons	Chapter 5
Feb. 12	The Influence of Drugs and Hormones on the Brain and Behavior	Chapter 6
Feb. 19	Studying the Brain's Structures and Functions	Chapter 7
Feb. 26	Development and Adaptation of the Nervous System	Chapter 8
Feb. 26-27	<b>Mid-term Exam (Chapters 2-8)</b>	
March 5	Sensing, Perceiving, and Seeing the World	Chapter 9
March 12	Hearing, Speaking, and Making Music	Chapter 10
<b>March 18-22</b>	<b>Spring Break</b>	
March 26	The Nervous System's Response to Stimulation and Production of Movement	Chapter 11
April 2	Emotional and Motivated Behavior	Chapter 12
April 9	Sleep and Dreams	Chapter 13
April 16	Learning and Memory	Chapter 14
April 23	The Thinking Brain	Chapter 15
April 30	The Misbehaving Brain (Disorders)	Chapter 16
<b>To be announced</b>	<b>Final Exam (Chapters 9-16)</b>	