SPRING SYLLABUS

PSY 5324.251: Biological Bases of Behavior

Tuesday/Thursday, 12:30-1:50

UAC 206

**Instructor info:**

Dr. Reiko Graham, PhD.

Office: UAC 265, Phone: 512-245-6806

Email: rg30@txstate.edu

Office hours: Monday-Thursday, 9:30-11:00 (please make an appointment)

**Course description:**

Biological psychology is the study of the physiology that underlies different behaviors and how this physiology changes due to genetic factors and develops due to experience. As such, the aim of biological psychology is to provide a description about how physiological events give rise to psychological events, blending biology with behavioral psychology (i.e., behavioral descriptions of psychological phenomena such as memory or emotion). This course is designed to provide you with background in nervous system structure and function appropriate to the field of Psychology and an appreciation of the biological determinants of behavior.

**Required reading:**

Watson, N.V. & Breedlove, S.M. (2016). The Mind’s Machine: Foundations of Brain and Behavior (2nd Ed.). Sunderland, MA: Sinauer Associates Inc.

<http://www.sinauer.com/the-mind-s-machine-801.html>

+ Selected readings (to be posted on TRACS)

**Course requirements and attendance policy:**

Attendance is expected; however, in the event of an absence, students are responsible for acquiring materials and information supplied in class on their own. Final grades will depend on performance on different class elements, which are listed below. Details regarding these elements are available on TRACS:

Attendance 10%

Midterm 1 20%

Midterm 2 20%

Oral presentation 20%

**TBD**

Final paper 30%

**Due Tuesday May 14 by 9 pm**

**EXTENSIONS/DEFERRALS:** Exam and paper deferrals will be made by the instructor only under extenuating circumstances on a case by case basis. If you are planning to request a deferral, it must be done either before the due date of the paper/exam, or within 48 hours after the paper/exam due date. The discretion of the instructor is final.

**Academic Honesty:**  Examples of academic dishonesty include cheating on a test, collusion to evade academic rules, and plagiarism—i.e., turning in work that is in any way not your own. Any cases of academic dishonesty will result in a failing grade for the course and will lead to additional disciplinary actions.

**Special Needs:** Students who require accommodations for the completion of this course must notify the Office of Disability Services and the instructor in the first week of the semester.

**Learning Outcomes:** The Department of Psychology has adopted expected student learning outcomes for the undergraduate major, the graduate major, and for PSY 1300, a general education course meeting a requirement for the social and behavioral science component. These expected student learning outcomes are available for your review at the following website: <http://www.psych.txstate.edu/assessment/>.

**Lecture schedule (also available on TRACS):**

Jan. 22 Introduction/Getting organized/Structure and function of the neuron Chapter 2

Jan. 24 Structure and function of the neuron/Synaptic transmission Chapters 2-3

Jan. 29 Neurotransmitters/Mechanisms of drug action Chapter 4

Jan. 31 Long-term potentiation, memory Chapter 13

Feb. 5 Development across the lifespan Chapter 13

Feb. 7 Neuroplasticity/recovery from injury Chapter 15, part III, supplemental readings

Feb. 12 Brain anatomy Chapter 2

Feb. 14 Methods in neuroscience Chapter 2, supplemental readings

Feb. 19 Catch-up/review

Feb. 21 **Midterm 1**

Feb. 26 Emotion 1: Fear/anxiety Chapter 11, supplemental readings

Feb. 28 Emotion 2: Anger, aggression, ASPD Chapter 11, supplemental readings

Mar. 5 Psychopathology –Disgust/OCD Chapter 12, supplemental readings

Mar. 7 Psychopathology – Depression/microbiome Chapter 12, supplemental readings

Mar. 12 Resilience/Spirituality supplemental readings

Mar. 14 Empathy/Social support/Friendship supplemental readings

Mar. 19 SPRING BREAK no class

Mar. 21 SPRING BREAK no class

Mar. 26 Attention and ADHD Chapter 14, supplemental readings

Mar. 28 Sleep Chapter 10

Apr. 2 Review

Apr. 4 **Midterm 2**

Apr. 9 Selected topic– Stress and the immune system Supplemental readings

Apr. 11Selected topic - Personality disorders/emotion regulation Supplemental readings

Apr. 16 Alzheimer’s (Alyse)/Music (Courtney)

Apr. 18 Pain & exercise (Dalton)/Drug interactions (Marcy)

Apr. 23 Face perception & psychopathology (Niki)/Psychiatric biomarkers (Kyle)

Apr. 25 Neuroplasticity (Shelby)/Bilingual brain (Eduardo)

Apr. 30 Love (Alyssa)/Oxytocin (Ashley)

May 2 Cognitive Neuroscience and animals

**Tuesday May 14 Final Paper due by 9 pm (email to rg30@txstate.edu)**