

# Introduction to Neurobiology – Course Syllabus

## Course Information

Instructor: Diego Gonzalez

Email: [dgonzalez@ucsb.edu](mailto:dgonzalez@ucsb.edu)

Student hours: Th 1:00 - 3:00 PM in PSY E 2xxx

TA:

TA email:

Meeting days and times: MW 10 - 11:15 AM in ILP 1xxx

## Course Description

This course introduces the biological foundations of mental processes and behavior. Topics include neural communication, brain structure and function, sensory processing, emotion, learning and memory, motivation, cognition, and the neurobiology of mental health disorders. This course utilizes a flipped classroom format wherein students are expected to come into class having watched pre-recorded lectures and done assigned readings before class, and time spent in class will be utilized to work on in-class activities and assignments.

## Course Learning Objectives

By the end of the quarter, students will be able to:

- Describe how neurons communicate and how brain systems interact
- Summarize how specific brain regions contribute to psychological functions
- Explain the biological basis for key cognitive and emotional processes
- Apply neurobiological concepts to understand psychological disorders
- Critically evaluate neuroscientific claims in popular media and identify limitations to our current understanding of neurobiology and behavior

## Weekly Schedule

Week	Topic	Assignments
Week 1	Introduction to Behavioral Neuroscience	Pre-quarter survey
Week 2	Neurons and Neural Communication	Parts of a neuron, action potential mechanisms, and neurotransmitter release drawings
Week 3	Brain Anatomy and Function	Brain lobes and regions drawing with corresponding functions
Week 4	Sensory Systems and Perception	Mid-quarter survey

Week 5	Motor Systems and Action	
Week 6	Attention and Cognition	
Week 7	Emotion and Motivation	Study summary
Week 8	Learning and Memory	Cheat sheet on how to improve studying
Week 9	Neurobiology of Mental Health Disorders	
Week 10	Summary and Review	Group presentations

## Assessments

- Weekly quizzes - 10%
- In-class activities 5%
- Assignments - 20%
- Midterm - 25%
- Group presentation - 5%
- Final - 35%