

# CURRICULUM PROPOSAL

## APPROVAL PAGE

Proposal Title: Adding From Molecules to Behavior and Introduction to Cognitive Neuroscience

College: COLA Department: Psychology

**DEPARTMENT CHAIR- Wendy S. Francis**

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I have read the enclosed proposal and approve this proposal on behalf of the department.



9/20/2025

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**COLLEGE CURRICULUM COMMITTEE CHAIR – Selfa A. Chew-Melendez**

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I have read the enclosed documents and approve the proposal on behalf of the college curriculum committee.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**COLLEGE DEAN – Anadeli Bencomo**

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I have read the enclosed documents and approve the proposal on behalf of the college. I certify that the necessary funds will be allocated by the college in support of this proposal.


\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# CURRICULUM CHANGE MEMO

Date: 8/25/2025

From: Ana I Schwartz, Psychology 

Through: Wendy S Francis, Psychology 

Through: Anadeli Bencomo, College of Liberal Arts Dean

To: Selfa A. Chew-Melendez, Chair Liberal Arts Undergraduate Curriculum Committee

Proposal Title: **Adding From Molecules to Behavior and Introduction to Cognitive Neuroscience**

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Select the proposal content (select as many as apply) and provide the rationale.

## Content

- ☐ New program or ☐ Program Change
- ☐ Bachelor's
  - ☐ Master's
  - ☐ Doctoral/Professional
  - ☐ Certificate
  - ☐ Fast Track
  - ☐ Minor
  - ☐ Concentration/Track
- ☒ New Course
- ☐ Closure (program, certificate, minor, concentration)
- ☐ Change
- ☐ CIP Code
  - ☐ Program/certificate SCH
  - ☐ Course Title
  - ☐ Course Description
  - ☐ Graduate Program Admission Requirements

## Rationale

Molecules to Behavior is a uniquely structured course intended to provide graduate and upper division undergraduate students with the most up-to-date research findings within the field of behavioral neuroscience. To achieve this, a series of guest speakers (all established leaders across different subdivisions of the neural sciences) will deliver research presentations highlighting their most recent work adopting innovative experimental techniques. This course structure/approach is taken because some of the most important and impression-forming interactions with classmates and professors occur during graduate seminars.

Introduction to Cognitive Neuroscience fills an important gap in our current course offerings, it is the only one focused on **cognitive** neuroscience, our current course offerings focus on behavioral neuroscience, animal models and addictions. This course provides student with in depth overviews of major processing networks that are implicated across an array of cognitive domains including language, memory and executive control processes. The course covers the latest neuroscience research, with content being updated every semester to follow the fast-pace of discovery.

## COURSE ADD

All fields below are required

Add additional Course Add forms as needed

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College : Liberal Arts

Department : Psychology

Effective Term : Fall 2026

### Rationale for adding the course:

This class has a unique structure intended to provide graduate and upper division undergraduate students with the most up-to-date research findings within the field of behavioral neuroscience

All fields below are required

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Subject Prefix and # PSYC 3333

Title (29 characters or fewer): From Molecules to Behavior

Dept. Administrative Code : 2380

[CIP Code](#) 42.0101.00

Departmental Approval Required ☐ Yes ☒ No

Course Level ☒ UG ☐ GR ☐ DR ☐ SP

Course will be taught: ☒ Face-to-Face ☐ Online ☐ Hybrid

Course minimum grade: if N leave blank, if Y provide grade Y C

- How many times may course be repeated to satisfy minimum grade requirement? 3

How many times may the course be taken for credit? (Please indicate 1-9 times): 2

Should the course be exempt from the "Three Repeat Rule?" ☐ Yes ☒ No

Grading Mode: ☒ Standard ☐ Pass/Fail ☐ Audit

### Description and 2-3 keywords (600 characters maximum):

(Keywords are for Facilitation of course searches and should be words not already included in course title or description)

This class provides graduate and upper division undergraduate students with the most up-to-date research findings within the field of behavioral neuroscience. A series of guest speakers will deliver research presentations highlighting their most recent findings adopting innovative state-of-the-art experimental techniques. Accordingly, this class will provide students with a platform to [1] learn about new research techniques, [2] establish networking opportunities, [3] learn about specialty topics within the field of neuroscience (i.e., chemical senses, addiction, depression, learning & memory), and [4] discover career paths (within and outside of academia) across the field of psychobiology/neuroscience.

Contact Hours (per week): 3.0 Lecture Hours

Lab Hours

Other

Types of Instruction (Schedule Type): Select all that apply

- |   |  |
|---|--|
| <input type="checkbox"/> A Lecture              | <input type="checkbox"/> H Thesis                              |
| <input type="checkbox"/> B Laboratory           | <input type="checkbox"/> I Dissertation                        |
| <input checked="" type="checkbox"/> C Practicum | <input type="checkbox"/> K Lecture/Lab Combined                |
| <input checked="" type="checkbox"/> D Seminar   | <input type="checkbox"/> O Discussion or Review (Study Skills) |
| <input type="checkbox"/> E Independent Study    | <input type="checkbox"/> P Specialized Instruction             |
| <input type="checkbox"/> F Private Lesson       | <input type="checkbox"/> Q Student Teaching                    |

Fields below if applicable

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If course is taught during a part of term in addition to a full 16-week term please indicate the length of the course (ex., 8 weeks):

TCCN (Use for lower division courses) :

Prerequisite(s):		
Course Number/ Placement Test	Minimum Grade Required/ Test Scores	Concurrent Enrollment Permitted? (Y/N)
PSYC 3340	C	N

Corequisite Course(s):	Equivalent Course(s):

Restrictions:	
Classification	
Major	

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*The curriculum office recommends consulting with other programs to determine whether there is significant overlap between the proposed course and any existing courses, especially when the course is part of an interdisciplinary program. Evidence of this consultation will facilitate the work of the curriculum committees.*

**Course Syllabus**

**See attachment**

## COURSE ADD

All fields below are required

Add additional Course Add forms as needed

---

College : Liberal Arts

Department : Psychology

Effective Term : Fall 2026

### Rationale for adding the course:

This course fills an important gap in our current course offerings, it is the only one focused on cognitive neuroscience, our current course offerings focus on behavioral neuroscience, animal models and addictions.

All fields below are required

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Subject Prefix and # PSYC 4302

Title (29 characters or fewer): Introduction to Cognitive Neuroscience

Dept. Administrative Code : 2380

CIP Code 26.1501.00

Departmental Approval Required ☐ Yes ☒ No

Course Level ☒ UG ☐ GR ☐ DR ☐ SP

Course will be taught: ☒ Face-to-Face ☐ Online ☐ Hybrid

Course minimum grade: if N leave blank, if Y provide grade Y, C

- How many times may course be repeated to satisfy minimum grade requirement? 3

How many times may the course be taken for credit? (Please indicate 1-9 times): 1

Should the course be exempt from the "Three Repeat Rule?" ☐ Yes ☒ No

Grading Mode: ☒ Standard ☐ Pass/Fail ☐ Audit

### Description and 2-3 keywords (600 characters maximum):

(Keywords are for Facilitation of course searches and should be words not already included in course title or description)

The course will cover in-depth the underlying brain networks that are implicated across domains of cognitive functioning including: Language, Memory, Learning, Cognitive control processes. Students will gain a sophisticated understanding of the interconnected and overlapping networks of neuronal activity and structure that underlie cognitive processing. The course will also describe methods of cognitive neuroscience including EEG, functional Magnetic Resonance Imaging and Tensor Imaging. Students will learn the basics of how these different methods work, their strengths and limitations. Students will have the opportunity to examine in depth the neurocognitive underpinnings of psychological/cognitive disorder or disability of their choosing.

Contact Hours (per week): 3.0 Lecture Hours

Lab Hours

Other

Types of Instruction (Schedule Type): Select all that apply

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> A Lecture | <input type="checkbox"/> H Thesis                              |
| <input type="checkbox"/> B Laboratory         | <input type="checkbox"/> I Dissertation                        |
| <input type="checkbox"/> C Practicum          | <input type="checkbox"/> K Lecture/Lab Combined                |
| <input checked="" type="checkbox"/> D Seminar | <input type="checkbox"/> O Discussion or Review (Study Skills) |
| <input type="checkbox"/> E Independent Study  | <input type="checkbox"/> P Specialized Instruction             |
| <input type="checkbox"/> F Private Lesson     | <input type="checkbox"/> Q Student Teaching                    |

Fields below if applicable

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If course is taught during a part of term in addition to a full 16-week term please indicate the length of the course (ex., 8 weeks):

TCCN (Use for lower division courses) :

Prerequisite(s):		
Course Number/ Placement Test	Minimum Grade Required/ Test Scores	Concurrent Enrollment Permitted? (Y/N)
PSYC 3340	C	N

Corequisite Course(s):	Equivalent Course(s):

Restrictions:	
Classification	
Major	

*The curriculum office recommends consulting with other programs to determine whether there is significant overlap between the proposed course and any existing courses, especially when the course is part of an interdisciplinary program. Evidence of this consultation will facilitate the work of the curriculum committees.*

**Course Syllabus**

**See attachment**





# PSYC BA Degree Plan

Required Credits: 120

Code	Title
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## Minor Required

This program requires the selection of a minor.

## Upper Division Hours

This degree plan requires completion of 39 upper-division hours.

## Designated Core

### Math Requirement (Courses require a grade of C or better.)

Select one course of the following:

<a href="#">MATH 1309</a>	College Algebra
<a href="#">MATH 1312</a>	Calculus II
<a href="#">MATH 1320</a>	Math for Social Sciences I
<a href="#">MATH 1411</a>	Calculus I
<a href="#">MATH 1508</a>	Precalculus
<a href="#">MATH 2313</a>	Calculus III
<a href="#">STAT 1380</a>	Statistical Literacy

A higher level calculus course

## University Core Curriculum

[Complete the University Core Curriculum requirements.](#)

## Psychology Major

Required Courses:

<a href="#">PSYC 1301</a>	Introduction to Psychology <sup>c</sup>
<a href="#">PSYC 1303</a>	Statistical Methods <sup>c</sup>
<a href="#">PSYC 3101</a>	Lab for Gen Exper Psyc <sup>c</sup>
<a href="#">PSYC 3102</a>	Professional Development
<a href="#">PSYC 3201</a>	Gen Experimental Psychology <sup>c</sup>

## PSYC Elective:

Select one of the following courses:

<a href="#">PSYC 3320</a>	Learning & Memory
<a href="#">PSYC 3330</a>	Sensation and Perception
<a href="#">PSYC 3331</a>	Cross-Cultural Psychology
<a href="#">PSYC 3346</a>	Drugs of Abuse and Behavior
<a href="#">PSYC 3347</a>	Behavior Modification
<a href="#">PSYC 3348</a>	Cognitive Psychology
<a href="#">PSYC 3350</a>	Health Psychology
<a href="#">PSYC 4301</a>	Psychological Testing
<a href="#">PSYC 4310</a>	Adolescent Development
<a href="#">PSYC 4311</a>	Advanced Topics Dev Psyc
<a href="#">PSYC 4312</a>	Advanced Psychopathology
<a href="#">PSYC 4313</a>	Physical & Cognitive Aging
<a href="#">PSYC 4315</a>	Psych of Criminal Behavior
<a href="#">PSYC 4324</a>	Psychobiology
<a href="#">PSYC 4341</a>	Motivation & Emotion
<a href="#">PSYC 4345</a>	Seminar in Psychology

Select eighteen hours of the following, with at least twelve being upper-division:

Code	Title
<a href="#">PSYC 2302</a>	Social Psychology
<a href="#">PSYC 2305</a>	Psychology of Human Sexuality
<a href="#">PSYC 2306</a>	Psychology of Personality
<a href="#">PSYC 2310</a>	Life Cycle Development
<a href="#">PSYC 2312</a>	Intro to Psychopathology
<a href="#">PSYC 2324</a>	Introductory Neuroscience
<a href="#">PSYC 3315</a>	Psychology and the Law
<a href="#">PSYC 3320</a>	Learning & Memory
<a href="#">PSYC 3330</a>	Sensation and Perception
<a href="#">PSYC 3331</a>	Cross-Cultural Psychology
<a href="#">PSYC 3332</a>	Neurosci of Social Motivation
<a href="#">PSYC 3333</a>	<a href="#">From Molecules to Behavior</a>
<a href="#">PSYC 3346</a>	Drugs of Abuse and Behavior
<a href="#">PSYC 3347</a>	Behavior Modification
<a href="#">PSYC 3348</a>	Cognitive Psychology
<a href="#">PSYC 3350</a>	Health Psychology
<a href="#">PSYC 4301</a>	Psychological Testing
<a href="#">PSYC 4302</a>	<a href="#">Introduction to Cognitive Neuroscience</a>
<a href="#">PSYC 4309</a>	History & Systems Psychology
<a href="#">PSYC 4310</a>	Adolescent Development
<a href="#">PSYC 4311</a>	Advanced Topics Dev Psyc
<a href="#">PSYC 4312</a>	Advanced Psychopathology
<a href="#">PSYC 4313</a>	Physical & Cognitive Aging
<a href="#">PSYC 4314</a>	Cognitive Development
<a href="#">PSYC 4315</a>	Psych of Criminal Behavior
<a href="#">PSYC 4316</a>	Language and Cognition
<a href="#">PSYC 4317</a>	Advanced Statistics
<a href="#">PSYC 4321</a>	Judgment and Decision Making
<a href="#">PSYC 4324</a>	Psychobiology
<a href="#">PSYC 4341</a>	Motivation & Emotion
<a href="#">PSYC 4343</a>	Seminar in Meta-Analysis
<a href="#">PSYC 4345</a>	Seminar in Psychology
<a href="#">PSYC 4352</a>	Independent Research
<a href="#">PSYC 4353</a>	Honors Thesis

### Open Electives

Select additional hours to complete a total of one hundred twenty hours

### Foreign Language

Select six credit of Foreign Language. All six credits must be in the same language sequence. <sup>1</sup>

### Block Electives

[Complete twelve upper-division hours from the blocks below, with three to six hours in each](#)

### Total Hours

<sup>1</sup> French and Spanish majors must fulfill this requirement in a language other than their major.

### Course List

C

# Psyc BS Degree Plan

Required Credits: 120

Code	Title
<b>Minor Required</b>	
This program requires the selection of a minor in Chemistry, Biological Science, Mathematics, or Physics.	
<b>Designated Core (Courses require a grade of C or better.) <sup>1</sup></b>	
Select one of the following:	
<a href="#">MATH 1411</a>	Calculus I
<b>University Core Curriculum</b>	
<a href="#">Complete the University Core Curriculum requirements.</a>	
<b>Psychology Major</b>	
Required Courses:	
<a href="#">PSYC 1301</a>	Introduction to Psychology <sup>c</sup>
<a href="#">PSYC 1303</a>	Statistical Methods <sup>c</sup>
<a href="#">PSYC 3101</a>	Lab for Gen Exper Psyc <sup>c</sup>
<a href="#">PSYC 3102</a>	Professional Development
<a href="#">PSYC 3201</a>	Gen Experimental Psychology <sup>c</sup>
<a href="#">PSYC 4317</a>	Advanced Statistics
Major Electives	
Select three courses from:	
<a href="#">PSYC 3320</a>	Learning & Memory
<a href="#">PSYC 3330</a>	Sensation and Perception
<a href="#">PSYC 3331</a>	Cross-Cultural Psychology
<a href="#">PSYC 3346</a>	Drugs of Abuse and Behavior
<a href="#">PSYC 3347</a>	Behavior Modification
<a href="#">PSYC 3348</a>	Cognitive Psychology
<a href="#">PSYC 3350</a>	Health Psychology
<a href="#">PSYC 4301</a>	Psychological Testing
<a href="#">PSYC 4310</a>	Adolescent Development
<a href="#">PSYC 4311</a>	Advanced Topics Dev Psyc
<a href="#">PSYC 4312</a>	Advanced Psychopathology
<a href="#">PSYC 4313</a>	Physical & Cognitive Aging
<a href="#">PSYC 4315</a>	Psych of Criminal Behavior
<a href="#">PSYC 4321</a>	Judgment and Decision Making
<a href="#">PSYC 4324</a>	Psychobiology
<a href="#">PSYC 4341</a>	Motivation & Emotion
<a href="#">PSYC 4345</a>	Seminar in Psychology
Select six hours of upper division PSYC:	
<a href="#">PSYC 3315</a>	Psychology and the Law
<a href="#">PSYC 3320</a>	Learning & Memory
<a href="#">PSYC 3330</a>	Sensation and Perception
<a href="#">PSYC 3331</a>	Cross-Cultural Psychology
<a href="#">PSYC 3346</a>	Drugs of Abuse and Behavior
<a href="#">PSYC 3347</a>	Behavior Modification

Code	Title
<a href="#">PSYC 3348</a>	Cognitive Psychology
<a href="#">PSYC 3350</a>	Health Psychology
<a href="#">PSYC 4301</a>	Psychological Testing
<a href="#">PSYC 4309</a>	History & Systems Psychology
<a href="#">PSYC 4310</a>	Adolescent Development
<a href="#">PSYC 4311</a>	Advanced Topics Dev Psyc
<a href="#">PSYC 4312</a>	Advanced Psychopathology
<a href="#">PSYC 4313</a>	Physical & Cognitive Aging
<a href="#">PSYC 4315</a>	Psych of Criminal Behavior
<a href="#">PSYC 4321</a>	Judgment and Decision Making
<a href="#">PSYC 4324</a>	Psychobiology
<a href="#">PSYC 4341</a>	Motivation & Emotion
<a href="#">PSYC 4343</a>	Seminar in Meta-Analysis
<a href="#">PSYC 4345</a>	Seminar in Psychology
<a href="#">PSYC 4352</a>	Independent Research
<a href="#">PSYC 4353</a>	Honors Thesis
Select nine additional hours of PSYC at any level:	
<a href="#">PSYC 2302</a>	Social Psychology
<a href="#">PSYC 2305</a>	Psychology of Human Sexuality
<a href="#">PSYC 2306</a>	Psychology of Personality
<a href="#">PSYC 2310</a>	Life Cycle Development
<a href="#">PSYC 2312</a>	Intro to Psychopathology
<a href="#">PSYC 2324</a>	Introductory Neuroscience
<a href="#">PSYC 3315</a>	Psychology and the Law
<a href="#">PSYC 3320</a>	Learning & Memory
<a href="#">PSYC 3330</a>	Sensation and Perception
<a href="#">PSYC 3331</a>	Cross-Cultural Psychology
PSYC 3332	Neurosci of Social Motivation
<a href="#">PSYC 3333</a>	<a href="#">From Molecules to Behavior</a>
<a href="#">PSYC 3346</a>	Drugs of Abuse and Behavior
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<a href="#">PSYC 3348</a>	Cognitive Psychology
<a href="#">PSYC 3350</a>	Health Psychology
<a href="#">PSYC 4301</a>	Psychological Testing
<a href="#">PSYC 4302</a>	<a href="#">Intro to Cognitive Neuroscience</a>
<a href="#">PSYC 4309</a>	History & Systems Psychology
<a href="#">PSYC 4311</a>	Advanced Topics Dev Psyc
<a href="#">PSYC 4312</a>	Advanced Psychopathology
PSYC 4314	Cognitive Development
<a href="#">PSYC 4316</a>	Language and Cognition
<a href="#">PSYC 4321</a>	Judgment and Decision Making
<a href="#">PSYC 4324</a>	Psychobiology
<a href="#">PSYC 4341</a>	Motivation & Emotion
<a href="#">PSYC 4343</a>	Seminar in Meta-Analysis
<a href="#">PSYC 4345</a>	Seminar in Psychology

Code	Title
<a href="#">PSYC 4352</a>	Independent Research
<a href="#">PSYC 4353</a>	Honors Thesis
<b>Open Electives</b>	
Select additional hours to complete a total of 120 total hours, 37 must be upper division	
<b>Total Hours</b>	
<a href="#">Course List</a>	

# PSYC 4302 Introduction to Cognitive Neuroscience

## Syllabus

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### Instructor

Dr. Ana I. Schwartz

### Meeting time/place

Psychology 308  
3:00 – 4:20

### Email

aischwartz@utep.edu

### Office Location

Vowell Hall 203

### Office Hours

Thursdays 2-4pm  
In person or via zoom

### Course Overview

The goal of this course is for students to develop a sophisticated understanding of the intricacies and complexity of the neural basis of cognitive function. This knowledge will allow students to interpret and contextualize research on cognitive processing. A solid understanding of the neural basis of cognitive function is essential for a full understanding of the very nature of human thought.

### ***Learning Outcomes:***

- 1) Describe how information is transferred within and across neurons
- 2) Map broad areas of the cortex and know which cognitive functions they are particularly specialized for
- 3) Know the basics of how neuroimaging techniques work, and appreciate their limitations
- 4) Develop a detailed understanding of the neural bases of the following cognitive functions:
  - a. Memory and learning
  - b. Executive functions
  - c. Language

### Required Text

Cognitive Neuroscience (5th Edition)

*Marie T. Banich and Rebecca J. Compton*

# Units

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- I) *Fundamentals of Neuroscience and Imaging Methods***
  - a. Electrochemical signaling in the nervous system
  - b. Cytoarchitectonic divisions of the cortex
  - c. Functional magnetic resonance imaging
  - d. Electromagnetic recording methods
- II) *Memory and Learning***
  - a. Hippocampal and nonhippocampal regions involved in memory and learning
  - b. Multiple memory and learning systems
  - c. Brain regions for different stages of memory
- III) *Executive Function***
  - a. Controlled versus automatic processes
- IV) *Language***
  - a. Brain systems for auditory/spoken modalities
    - i. Psycholinguistic perspectives
    - ii. Syntax, semantics, comprehension, production
  - b. Neural basis of reading

## Tests 40% of grade

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There will be 3 tests during the regular semester given every 5 weeks. My teaching philosophy is to hold learning constant and to allow time to vary. Therefore, this class will allow us flexibility to take the time we need to learn content in depth, and not be stuck to the timing of scheduled tests. Thus, each test will cover whatever content we covered to that point, which means we might continue that topic even after a particular test. It also means that a test may cover part of one unit and part of another.

Tests will be a combination of short answer, fill in the blank, matching, etc. Tests will be taken in class. Students can opt to complete them electronically through BBD or on paper. If a test is missed the student must take the optional cumulative final administered on the day of the final. The cumulative will be administered through blackboard and will consist of 40-50 multiple choice items. Students who took all 3 regular tests have the option to take the cumulative to improve their grade, the grade on the cumulative can replace a lower test grade.

## Term Paper Development Assignments 30% of grade

For Undergraduate Credit	For Graduate Credit
1) 1-3 page summary of neurological mechanisms of chosen disorder	1) 1 page statement of term paper topic and relevance to research interests



2) Reading list of 4 empirical articles 3) Outline of paper 4) Rough draft of paper	2) Summary of neurological bases associated with the function of interest. 3) Reading list of ~10 empirical articles 4) Outline of paper 5) Rough draft of paper
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## Term paper 30% of grade

### ***For Undergraduate Credit:***

For this term paper students will review and synthesize research on the neural causal mechanisms that contribute to a specific psychological disorder. Students will pick one of the following disorders:

- Schizophrenia
- Depression
- Anxiety disorder
- Autism
- Dyslexia
- Alzheimer's disease
- Parkinson's disease
- Huntington's disease

For any single disorder there are multiple, usually interacting neural mechanisms at work. In the term paper the student will focus specifically on 2-3 mechanisms. This review will be based on a synthesis of findings from the most up to date research in published, peer reviewed, empirical research articles.

Each summary will include:

- 1) A clear description of the neural mechanism in neurological terms
  - a. Clearly expressed the why and how, connecting the neurological disruption to the observed symptoms
- 2) The types of tasks/methodology used in supporting this mechanism
- 3) An evaluation of how strongly supported this mechanism is:
  - a. Strongly supported (most evidence in favor, very little against)
  - b. Somewhat supported (some evidence in favor, but limited or recent)
  - c. Controversial (evidence in favor, but also evidence against)

Developing the term paper

Steps:

- 1) Choose the disorder and read the corresponding section in the book. Summarize in 1-3 pages the various neurological causal mechanisms. Identify the 2 or 3 mechanisms that will be the focus of the term paper
- 2) Reading list
  - a. A minimum of 4 empirical articles
- 3) Outline of paper

### ***For Graduate Credit***

The goal of this course for graduate students is that content is directly applicable to their research. Graduate students will write a literature review summary of the latest scientific understanding of the neurological underpinnings of a specific cognitive/mental/emotional etc function that is directly related and informative to their program of research or research interests.

#### Paper components

- 1) A description of the various neurological underpinnings of the key processes of the function of interest
  - a. Clearly expressed the why and how, connecting the neurological regions/processes to the processes of the function
  - b. For each neural mechanism an evaluation of how well-supported it is
    - i. Strongly supported (most evidence in favor, very little against)
    - ii. Somewhat supported (some evidence in favor, but limited or recent)
    - iii. Controversial (evidence in favor, but also evidence against)
- 2) A review of typical tasks and paradigms used that have supported the neurological underpinnings
- 3) Select 1 specific disorder of the function and write a synthesizes summary of 2-3 proposed neurological mechanisms causing the disorder
  - a. Describe the symptomatology of the disorder
  - b. Risk factors/protective factors
    - i. And their neural mechanism
  - c. The types of tasks/methodology used in supporting this mechanism
  - d. An evaluation of how strongly supported this mechanism is:
    - i. Strongly supported (most evidence in favor, very little against)
    - ii. Somewhat supported (some evidence in favor, but limited or recent)
    - iii. Controversial (evidence in favor, but also evidence against)
- 4) 20 minutes class presentation
  - a. On the last day of class give a 20 minute powerpoint presentation on the paper. The presentation should be classroom lecture style, and described at a level accessible to advanced undergraduates.

#### Steps

- 1) Choose the function/area that will be the focus of the paper along with a 1 page statement of how the paper will contribute to your research
- 2) After receiving approval form step 1, read relevant sections in the book. Summarize in 1-3 pages the various neurological bases associated with the function of interest.
- 3) Reading list
  - a. ~ 10 empirical articles
  - b. Can also include chapters in addition to the ~10 empirical articles
- 4) Outline of paper

## Communication

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To get the most out of this course students must actively engage with the instructor as well as other students. Students should come to office hours to check their understanding of content and to check their progress on the term paper and related assignments.




**Students will use email for the following topics/issues:**

- 1) To arrange one on one meeting if student cannot make office hours
- 2) To ask quick clarification question from textbook or lecture
- 3) Alert professor if student thinks an error was made in grade or assignment credit

**Students need to meet in person for the following topics/issues**

- 1) Anticipated prolonged absences due to family/medical/personal issues
- 2) Discussion of grades
- 3) Review of exams/assignments

## Key Dates

	Monday	Wednesday	<i>Tentative</i> timing of topic coverage
8/26			 <div>Fundamentals of cog. neuro</div>
9/2	NO CLASS University holiday		
9/9			
9/16			 <div>Neuro basis of memory, learning, executive function</div>
9/23		Summary of term paper topic due	
9/30		TEST 1	
10/7			
10/14		Reading list due	
10/21			 <div>Neuro basis of language</div>
10/28			
11/4		TEST 2	
11/11		Outline of paper due	
11/18			
11.25	CLASS VIA ZOOM	CLASS VIA ZOOM	
12/2	Grad student presentation	TEST 3	
12/9	Optional Cumulative Exam	Final Paper Due	

## Attendance

Frequent absences will have a natural negative consequence on the course grade due to missing in class discussion of lecture topics and brain storming/group discussion of assignments. Therefore, there is no need to take attendance. Missing more than 2 classes is likely to result in a full letter grade lower. Thus, there is no need to inform me of missing a class. However, if a student anticipates missing several classes due to an on-going problem (health, personal, etc) the student needs to make a time to meet with me within one week of such knowledge to determine how that student can still earn course credit or if the student should consider dropping the course.

## Academic dishonesty

Academic Dishonesty is NEVER tolerated by UTEP or the Department of Psychology. All suspected cases are reported to the Dean of Students for Academic Sanctions. These sanctions may include expulsion. All work submitted must be original; students may not submit graded work from another course. Forms of academic dishonesty include: Collusion—lending your work to another person to submit as his or her own; Fabrication—deliberately creating false information on a works cited page, and Plagiarism—the presentation of another person's work as your own, whether you mean to or not (i.e. copying parts of or whole papers off the Internet). See the Dean of Students website at <http://www.utep.edu/dos/acadintg.htm> for more information.

## Use of AI

- Students may use AI to generate ideas or as way to find relevant, original sources of information.
- Use of AI in class during group discussions is permitted and does not have to be formally documented in writing.
  - a. Use of AI to generate ideas for an assignment or term paper requires citing and giving credit: This will consist of adding an appendix showing (a) the entire exchange, highlighting the most relevant sections; (b) a description of precisely which AI tools were used (e.g. ChatGPT private subscription version or DALL-E free version), (c) an explanation of how the AI tools were used

# Seminar in Psychology: Molecules to Behavior

## Special Topics: Behavioral Neuroscience

PSYC-6378/4345 Fall 2024

Wednesday 12:00-2:50 pm Mountain Time (Zoom)

**Instructor:** Sergio Iñiguez, Ph.D.      **Phone:** 915-747-5769

**Email:** sdiniguez@utep.edu    **Office:** Psychology Building 203    **Office hrs:** by appointment via zoom.

**Structure and Goals of the Course:** This class has a unique structure intended to provide graduate and upper division undergraduate students with the most up-to-date research findings within the field of behavioral neuroscience. To achieve this, a series of guest speakers (all established leaders across different subdivisions of the neural sciences) will deliver research presentations highlighting their most recent work adopting innovative experimental techniques. This course structure/approach is taken because some of the most important and impression-forming interactions with classmates and professors occur during graduate seminars. Accordingly, this class will provide you with a platform to (1) learn about new research techniques, (2) meet leading researchers who share your research interests, (3) learn about specialty topics within the field of neuroscience (i.e., chemical senses, addiction, depression, learning & memory), and (4) discover alternative career paths (outside of academia) in the field of neuroscience.

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**Grading (Undergraduate students):** Points for this course can be earned in **three** separate ways. Specifically, (1) by attendance (100 points), (2) active participation (asking questions; 50 points), and (3) completing weekly summaries about the researcher's work (50 points); for a total of **200** possible points. **Extra Credit:** Up to 6 extra credit points (3% of the final grade) can be earned by participating in SONA research studies in the Department of Psychology. Extra credit is *DUE* on or before the last day of **regular class** (i.e., before Finals week – see schedule below for specific dates).

### GENERAL GRADING SCALE (by %)

A	B	C	D	F
90-100%	80-89%	67-79%	66-60%	≤59%

The following point distribution will determine your final Grade:

### UNDERGRADUATE STUDENT GRADING SCALE: TOTAL POINTS (200)

A	B	C	D	F
180-200	160-179	134-159	133-120	≤119.9

**Grading (Graduate students):** Points for this course will be earned in **four** separate ways. Specifically, (1) by attendance (100 points), (2) active participation (asking questions and/or

introducing speakers; 50 points), (3) completing weekly summaries about the researcher's work (50 points), and (4) by submitting a Final **Reaction Paper** (100 points); for a total of **300** possible points. **Extra Credit:** Up to 9 extra credit points (3% of the final grade) can be earned by participating in SONA research studies in the Department of Psychology. Extra credit is *DUE* on or before the last day of **regular class** (i.e., before Finals week).

**GRADUATE STUDENT GRADING SCALE: TOTAL POINTS (300)**

A	B	C	D	F
270-300	240-269	200-239	199-180	≤179.9

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**Attendance:** Attendance is absolutely required. Given the structure of the class (i.e., having different guest speakers each week) attendance, **via zoom**, will be taken and will count towards your final grade. You can earn up to **100 points** for attendance alone (10 points per class meeting). If you are absent (regardless of the reason), you are not participating, and thus, cannot earn participation-points toward your final grade (so please do not ask if you can make up those attendance points if you are absent – the answer is no).

**Participation:** It is the responsibility of every student to read the appropriate research article (authored by the guest speaker) before each class session (list of papers will be available on Blackboard). Students should attempt to be active participants (**with camera on**) in the presentations by asking relevant questions (at the end of the research presentation) – of course, reading about the speaker's previously published work will facilitate this process. Student participation will be graded both in terms of *quality and quantity* (you can earn up to **50 points**). Active discussions are more interesting than passive learning. Also, keep in mind that we want to impress our speakers by asking astute and thoughtful questions (you can earn up to 10 points within a given session). Obviously, missing class means that you were neither an active or passive participant in that day's presentations, so you will not be able to earn participation points if you miss a class session. During each session, a Graduate student will have to introduce each speaker, so this is a way to earn participation points by the graduate students enrolled in the class.

**Weekly Summary Papers:** All undergraduate and graduate students are required to submit a 1-page summary of the work presented by the speaker (due by Monday of the following week after each presentation; giving you 5 days to complete it). Each summary paper you submit will earn you 5 points toward your final grade (up to **50 points**). Since we are not going to be recording the sessions, you cannot make up these 5 points if you miss a class session.

**\*Final Reaction Paper:** Graduate students are required to do one reaction paper (**100 points**). Specifically, you will have to select one published experimental paper (not a review paper) by one of the listed speakers of the course. The paper selected must be published, ideally, within the past 5 years, and pre-approved by me (Prof. Iñiguez). To be on the safe side, you should show me the selected article at least two weeks before the paper due date (**12/04/24**). The reaction paper should be subdivided into 3 sections (about 1 page in length per section). Section 1 should provide a summary of the Introduction (problem being evaluated), highlighting the specific hypothesis postulated. Section 2 should summarize the different experimental techniques adopted, and why they are well suited to evaluate the hypothesis postulated. Section 3 should provide a summary of the Discussion section, while emphasizing how the study *links a biological marker to a specific behavior*

(i.e., Molecules to Behavior approach). Reaction papers should be no longer than 4 pages (12 point with one-inch margins in Times New Roman font).

**Blackboard Website:** The course **syllabus**, **Zoom link** to attend lectures, **readings** (articles from our guest speakers), **announcements**, and **grades** will be posted on the course Blackboard website (<http://my.utep.edu>).

**Disabled Student Policies:** The Americans with Disabilities Act (ADA) requires that all qualified persons should have equal opportunity and access to education regardless of the presence of any disabling conditions (login page is at: <http://cassportal.utep.edu>). Students with disabilities requiring academic accommodations should contact The Center for Accommodations and Support Services (CASS) office located at Union Building East Room 106 (**915-747-5148**). If you require special provisions, please notify me during the first week of classes with any supporting documentation. For more information contact **cass@utep.edu** or visit their webpage at: <https://www.utep.edu/student-affairs/cass/>.

**Classroom/Zoom behavior** is expected to be appropriate for university-level learning. Disruptive talking in class is not allowed (so mute your mic while speakers are presenting their data), as it disturbs the speaker and/or other students. Keep your **camera on** as much as possible, as it displays interest to our guest speakers, who are **donating their time** to present their work to us from other universities. Please help to create an atmosphere of **mutual respect** and commitment to learning.

**Plagiarism/Cheating.** Plagiarism and/or cheating on exams/assignments are violations of the Student Disciplinary code and will result in an "F" for the course. See UTEP's *Office of Student Conduct and Conflict Resolution* webpage for details:

<https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>

**Fall 2024 Schedule (PSYC4345; Wednesdays 12:00 pm – 2:50 pm Mountain Daylight Time)**

<b>Date</b>	<b>Topics/Presenters</b>
08/28	Organizational Meeting: <b>Sergio Iñiguez, PhD</b> – UT El Paso
09/04	Speaker: <b>Edgardo Falcon, PhD</b> – National Institutes of Health (Government)
09/11	Speaker: <b>Zuhair Abdulla, PhD</b> – Yale University <b>Census Day</b>
09/18	Speaker: <b>Cecilia Hinojosa, PhD</b> – University of New Mexico
09/25	Speaker: <b>Michelle Mazei-Robison, PhD</b> – Michigan State University
10/02	Speaker: <b>Sergios Charntikov, PhD</b> – University of New Hampshire
10/09	Speaker: <b>SfN</b>
10/16	Speaker: <b>Minerva Rodriguez, M.A.</b> – UT El Paso
10/23	Speaker: <b>Claudia Aguirre, PhD</b> – University of California Los Angeles
10/30	Speaker: <b>Rodolfo Flores, PhD</b> – UT El Paso <b>Drop/Withdrawal Deadline</b>
11/06	Speaker: <b>Mabel Terminel, PhD</b> – National Institutes of Health (Science Policy)
11/13	Speaker: <b>Arturo Zavala, PhD</b> – California State University Long Beach
11/20	Speaker: <b>Nathan Pentkowski, PhD</b> – University of New Mexico
11/27	Speaker: <b>Carolina Cawthon, PhD</b> – University of Tennessee Knoxville
12/04	Speaker: <b>Caroline Palavicino-Maggio, PhD</b> – Harvard ( <b>Extra Credit</b> and <b>Paper Due Date</b> )
12/11	Finals week <b>ACNP</b>