

PSYC 4345: Laboratory Methods in Neuroscience
Course Syllabus – FALL 2021
University of Texas at El Paso

Class Information:

CRN 18685; Monday and Wednesday; 3:00pm to 4:20pm
Psychology Building, Room 105

Instructor Information:

Instructor: Dr. Laura O'Dell
Email: lodell@utep.edu
Office: Psychology 211
Office Hours: Monday and Wednesday 4:30pm to 5:30

Instructor: Dr. Felix Matos
Email: fmatos@utep.edu
Office: Psychology 105
Office Hours: By appointment

Teaching Assistant: Veronika Espinoza
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Office: Psychology 202
Office Hours: By appointment

Course Description:

This is a research driven course (RDC) designed for students that are pursuing research in the field of neuroscience. The goal of the course is to introduce students to a neuroscience laboratory environment. The course objective is to provide students with the opportunity, knowledge, and experience to learn the basic skills needed to excel in a neuroscience laboratory and in future mentored research experiences. The course will develop the students' ability to organize, retrieve, and derive information the way neuroscience researchers do.

Students will have the opportunity to perform a sheep brain dissection which will help them identify different brain structures and their functional role in behavioral outputs. The dissection exercise will also help students to understand anatomical planes in a manner that will allow them to identify parts of the brain in reference to other brain regions.

We will also assess electrophysiological recordings in an insect model preparation. Insects provide a simpler way for students to start learning about how neurons communicate with each other and how that communication can be affected by different factors, such as drug manipulations, electrical stimulation, temperature, and tactile stimulation. Students will learn how these different factors affect neuronal communication by performing various electrophysiological studies with cockroaches and crickets.

UTEP EDGE:

As part of the UTEP Edge program, this course is committed to help students develop skills like: leadership, confidence, problem-solving, communication, teamwork, entrepreneurship and critical thinking. Course discussions will be encouraged in an active learning environment.

Overall Course Goals:

Goal 1: Students will learn the basics of electrophysiology.

Goal 2: Students will learn how to perform a dissection of a brain.

Goal 3: Students will ensure their success as they pursue their academic and research goals.

Goal 4: Students will build essential research skills in a neuroscience laboratory.

Goal 5: Students will begin to build a network of faculty, staff, and peers to create a supportive and positive learning environment.

Materials:

- All students are responsible for their own lab coat.
- Gloves will be provided.
- Students are encouraged to bring a laptop computer or an iPad, but it is not a requirement.

Online Resources:

- Reading material will be available on Blackboard. Important notifications will be done through Blackboard and official UTEP emails.
- Only communications through official UTEP emails will be responded.

Grading Scale:

90 – 100 = A

80 – 89.9 = B

70 – 79.9 = C

60 – 69.9 = D

Below 60 = F

According to the registrar's website, the final day to drop the course is **Oct 29th**. Please review the registrar's website for a complete information regarding withdrawals, etc.

Note: Students need to obtain a grade of C or better to pass this class.

Course Evaluation:

Exams: 40%

Experiments: 35%

Assignments: 25%

Point Categories:

Exams: There are four (4) scheduled exams for this course. They will occur in the class and will cover course material up until that day.

Class Participation and Attendance: Extra credit will be applied to the final grade. Students can earn up to five (5) points with perfect attendance and a high level of class participation.

Experiments: Students will be evaluated on their ability to follow instructions and successful completion of activities throughout the class. This portion of the student's grade will be based on the electrophysiology portion of the course.

Policies:

Absences: After 3 absences you will be given a written warning. If absent 4 times, you may be dropped from the course. Perfect attendance will result in extra credit applied to your final grade.

Tardiness: If you are late 5 or more minutes for class, 2 credit points will be subtracted. If you are more than 15 minutes late for class, you cannot earn credit for attending class that day.

Missed Assignments: Exams and in-class assignments cannot be made up unless you provide a valid written excuse from a doctor, in the case of an illness. The written excuse must contain contact information that can be used for verification.

Deadlines: Assignments will not be accepted after a given due date unless you provide a valid written excuse.

Safety:

Due to the nature of the course, all students will receive training about the proper use of personal protective equipment (PPE). Students will have the opportunity to work with the insects after they have been trained and approved by the course instructors. During experiments, proper clothing and PPE are mandatory (this will be discussed the first day of class). Students that do not bring appropriate clothing and PPE will not be allowed to perform the electrophysiological experiments.

COVID-19:

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org

Handbook of Operating Procedures (<https://www.utep.edu/hoop/>):

Standards of Conduct (Section 1.1): All students are expected and required to obey federal, state, and local laws, to comply with the Regents' *Rules and Regulations*, with The University of Texas System and institutional rules and regulations, with directives issued by an administrative official of the U. T. System or The University of Texas at El Paso ("University" or "Institution") in the course of his or her authorized duties, and to observe standards of conduct appropriate for an academic institution.

Academic Dishonesty (Section 1.2.3): Any student who commits an act of academic dishonesty is subject to discipline. Academic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person without giving sufficient credit, taking an examination for another person, or any act designed to give unfair advantage to a student or the attempt to commit such acts. The Office of Student Conduct & Conflict Resolution (OSCCR) will conduct an investigation, determine whether to proceed with the charges, and if so, propose the appropriate sanction. The OSCCR may proceed with the disciplinary process even if the student is subject to concurrent criminal or civil proceedings. Students will have the opportunity to appeal disciplinary action.

Class Environment: Cell phones must be silenced. Use of cells phones will result in dismissal of class for that day.

Accommodations Policy:

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as

amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services](#) (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the [CASS portal](#).

Syllabus Change Policy:

This syllabus is a guide for the course and is subject to change with advance notice.