

# HEALTH DISPARITIES IN EL PASO (BIOL 4395) – FALL 2022

**Instructors:** Jeffrey T. Olimpo, Ph.D.; and Amie M. Kern, Ph.D.

**Office:** B226, Biology Bldg. (TR 3:00 - 4:00pm)\*

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\*Please note that I (Dr. O) am available to meet either in person or via Zoom, depending upon your preference. Please reach out to me via e-mail to schedule a time to connect.

## COURSE DESCRIPTION

Welcome to *a study of our backyard!* This course offers students a unique opportunity to explore the relationship between disease, the environment, and public health through an intensive, self-driven research experience with accompanying lecture content. As opposed to traditional laboratory coursework, this means that *you* will be determining your own research questions, methods to use, types of experiments to perform, and “next steps” in the research process based on obtained conclusions. We (as your instructors) seek to promote an environment where reasonable risk is rewarded, overcoming failure is part of true scientific inquiry, and the contributions that *you* make to science and to our community are invaluable. Welcome to BIOL 4395: Health Disparities in El Paso! 😊

## COURSE OBJECTIVES

This course is designed to provide students with an authentic research opportunity in STEM. Upon completion of the course, students will be able to:

- Compare and contrast the various descriptive and analytic study designs used in the fields of epidemiology and public health
- Utilize scientific process skills to make informed decisions throughout all aspects of the experimentation process
- Apply principles of scientific inquiry to conduct a descriptive and/or analytic study of their choosing within the fields of health disparities, environmental health, molecular epidemiology, public health bioinformatics, etc.
- Demonstrate an increased understanding of qualitative and quantitative research methods, as evidenced in written and oral deliverables
- Make meaningful empirical connections between diseases and the environment
- Describe, succinctly, the results of their research to both lay and scientific audiences

## COURSE MATERIALS

1. All course handouts will be made available via Blackboard and/or distributed in class
  2. Laboratory notebook (a *non*-spiral bound composition book will suffice) and pen
  3. Personal Protective Equipment (PPE): laboratory coat, safety glasses (optional)
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## ACADEMIC INTEGRITY

As members of a scholarly community dedicated to healthy intellectual development, students and faculty are expected to share the responsibility of maintaining high standards of honesty and integrity in their academic work. All material for this course must be your work and no one else's. **Cheating or plagiarism in any form will not be tolerated.** This includes, but is not limited to, copying someone else's work on an assignment. Please note that all suspected instances of plagiarism or academic dishonesty will be referred to the Dean of Students Office, in accordance with UTEP policies and procedures.

The honor code also states that all members of the UTEP community are entrusted with the task of upholding and promoting five fundamental values: Honesty, Trust, Respect, Fairness, and Responsibility. These core elements foster an atmosphere, inside and outside of the classroom, which serves as a foundation and guides the UTEP community's academic, professional, and personal growth. Endorsement of these core elements by students, faculty, staff, administration, and trustees strengthens the integrity and value of our academic climate.

## COMMUNICATIONS

When you e-mail us, please include a proper subject, any message you are responding to, the course name and CRN, as well as your name. Please use your UTEP account to ensure that the e-mail is not blocked by the university's spam filter. If you e-mail us directly from our Blackboard course, essential information like the course name and section will automatically be included. We will do our best to respond to your e-mail within 48 hours. If you do not receive a response within this timeframe, we ask that you please re-send your e-mail. Please be sure to regularly check the e-mail account listed for you in Blackboard, as this is where all course correspondence will be sent.

## CENTER FOR ACCOMMODATIONS AND SUPPORT SERVICES

Students needing special accommodations in this course must be registered with the Center for Accommodations and Support Services (CASS) Office in Room 106 of the Union East Bldg. You may contact them at (915) 747-5148 or [cass@utep.edu](mailto:cass@utep.edu) for more information. Once you are registered with the CASS Office, please notify us as soon as possible so that we may meet to discuss appropriate accommodations, as recommended by CASS.

## TECHNICAL SUPPORT

The IT Support Team can assist with Blackboard, password resets, and student e-mail accounts. Hours and other helpful information can be found at <http://www.helpdesk.utep.edu>.

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## COURSE GRADING & EXPECTATIONS

### COURSE GRADING:

- Attendance/Effort 25%
- Tentative Independent Project Idea 5%
- Research Question(s) 5%
- Preliminary Draft of Proposal 10%
- Final Draft of Proposal 15%
- Laboratory Notebook Checks 10%
- Final Research Prospectus 10%
- Final Research Presentation 20%

A = 90 - 100%	D = 60 - 69%
B = 80 - 89%	F = <60%
C = 70 - 79%	

### ATTENDANCE

Your attendance is **required** for all sessions, unless otherwise noted. Class will begin promptly at **4:30pm** and will run no later than **5:50pm**. If, for whatever reason, you cannot make it to class on time, please do your best to enter quietly when you do arrive. Please note that classes may be held in either a face-to-face or virtual format, as determined by the instructional team. Your safety is our top priority, hence our decision to structure the course in that manner. Further, if you are aware of any factors that may impact your attendance, please let us know as soon as possible so that we may work together to find a viable solution.

### LABORATORY CONDUCT

Please make every effort to be courteous to your fellow students and the course instructors. Policies regarding responsible conduct of research and ethics are expected to be adhered to (we will discuss these in class) and are essential not only in a "local" sense but in a broader, professional sense as well. Transparency and open lines of communication in the laboratory are critical. Therefore, please report all laboratory accidents, suspected instances of research misconduct, etc. to us ASAP.

## BLACKBOARD

This course makes extensive use of Blackboard® (<https://adminapps.utep.edu/blackboardlearn>). You will use Blackboard to submit assignments, download or print course materials, and check your grades. Please note that your login and password are the same as you would use to access your UTEP e-mail account.

## RESEARCH PROPOSAL, FINAL PRESENTATION/PROSPECTUS, AND NOTEBOOK

Details regarding expectations and grading criteria for the project idea/research question, proposal, final research presentation/prospectus, and notebook will be distributed in class.

### TENTATIVE COURSE SCHEDULE

Week	Date	Topic(s)	Assignment(s) Due
1	8/23	Introductions; Course Overview; Skills Assessment	-
	8/25	Mini-Project: Water Quality; Primary Lit. Discuss.	-
2	8/30	RQ/Methods Brainstorm; Laboratory Notebooks	-
	9/1	Sample Collection - Water Quality	<b>Project Idea</b>
3	9/6	Sample Collection - <i>E. coli</i> Test	<b>Research Question(s)</b>
	9/8	Introduction to Quant. and Qual. Research Methods	-
4	9/13	Mathematical Modeling of Water Quality in El Paso	<b>Preliminary Proposal</b>
	9/15	Public Health Impacts and Solutions (Lecture)	-
5	9/20	Public Health Impacts and Solutions (Lab)	-
	9/22	Open Work Block: Final Proposals	<b>Final Proposal</b>
6	9/27	Science Communication: Public Infographics	-
	9/29	Science Communication: White Paper	-
7 - 12	10/4 - 11/10	Independent Research Projects	<b>Notebook Check (10/20)</b>
			<b>Notebook Check (11/10)</b>
13	11/15	Science Communication: Research Prospectus	-
	11/17	Science Communication: Presentations	-
14	<b>THANKSGIVING HOLIDAY!</b>		
15	11/29	Final Presentations (Groups 1 - 3)	<b>Final Presentations</b>
	12/1	Final Presentations (Groups 4 - 6)	<b>Final Presentations</b>
<b>Research Prospectuses Due ~ 12/8 @ 11:59pm (MT)</b>			

\* Please note that the course drop date is Oct. 28<sup>th</sup>.