

Research and Teaching Integration

Math 4370/ BIOL 4395

Spring 2022

TR 10:30-11:50

MAIN 214

Course Instructors: Amy Wagler, Ph.D.

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Course TA: Aimeé Hernandez

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Textbook Required: None

Course Objectives:

This course will teach core communication, interdisciplinary and project-based learning, and teaching skills in a collaborative and active learning setting. Students in the course will work in interdisciplinary teams to develop research-teaching integration modules designed to:

- Utilize cutting edge methods and techniques in science communication
 - Improve research and related skills in preparation for graduate school, STEM teaching, or entering the STEM workforce
 - Incorporate interdisciplinary approaches from research into teaching using a project-based learning framework (PBL)
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Course Activities/Assignments

Most class periods will have in-class group work completed within the period. Additionally, guest speakers on topics such as science communication, interdisciplinary research and teaching, and project-based learning and teaching will be a regular feature of the course. Students will complete reflection papers regularly to map growth in these key areas. A final project, consisting of a project-based learning unit will be the primary product of the course.

Assessment of Course Objectives

- Daily in-class assignments- graded for completeness only
- Weekly assignments/Mini Projects- will be graded for completeness and accuracy. A rubric will be provided at the time the project is assigned so it is clear how you will be assessed for the project.
- Final Project- due at the end of the semester. A rubric will be provided at the time the project is assigned.

Grading Policy

- In-class and engagement work- 15%
- Weekly assignments/Mini-projects- 25%
- Final Project- 60% (in 4 incremental grades at 15% each)

If a class is missed for a valid and documented reason, the daily in-class assignments may be made up for full credit. All other assignments should be turned in on time.

Attendance Policy

You must attend class to turn in the in-class assignments. Regularly missing class for an undocumented reason will affect your grade via the in-class assignments and occasional computing assignments. In circumstances where UTEP policy requires rescheduling (e.g., official travel to present at a scientific meeting or doctors note excusing absence), students are required to arrange to attend the laboratory session of another section, if possible and to work with the instructor and TA in advance for possible alternatives if such options are not available.

Academic Integrity Policy

Cheating or plagiarism will not be tolerated. The university provides students and faculty guidelines on how to handle violations of academic integrity, which we expect you to follow (you can read them at <https://www.utep.edu/hoop/index.html>). The

instructor and TA will follow these policies and follow up on possible cheating and plagiarism on all assignments.

Civility Statement

This is a class where participation is required. We will work in groups and individually in class. You are expected to participate in both the group and individual class exercises. I welcome you to ask questions and add to the in-class discussion.

Disability Statement

If a student has or suspects she/he has a disability and needs accommodation, they should contact the Disabled Student Services Office (DSSO) at 747-5148 or dss@utep.edu or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.

Military Statement

If you are a military student with the potential of being called to military service and /or training during the semester, you are encouraged to contact me as soon as possible.

UTEP College of Science Policies

The UTEP Spring drop date is April 1st, 2022. The College of Science will remain aligned with the University and not approve any drop requests after that date.

All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to a month based upon completion of data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

COVID-19 Statement

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let your AI/TA know as soon as possible to work on appropriate accommodations. 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 support you 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 facemasks 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

Course Schedule

This course schedule is tentative, and the instructor may vary from it when necessary. Please use this primarily as an outline of the course materials covered throughout the semester.

	Date	Topic	Weekly Assignment
1	January 18 January 20	Setting the Course Culture Independent Development Plan	Independent Development Plan- <i>due</i> <i>Jan. 27</i>
2	January 25 January 27	Science Communication with Dr. Larry Lesser Five Levels of Science Communication Module	
3	February 1 February 3	Science Communication with Dr. Larry Lesser Five Levels of Science Communication Module (Cont.)	
4	February 8 February 10	Five Levels of Science Communication Module (Cont.) Science Communication Wrap up	Five Levels of Science Communication Module <i>due</i>
5	February 15 February 17	Interdisciplinary Research with Dr. Jeffrey Olimpo Interdisciplinary Research Module	

6	February 22	Interdisciplinary Research Module	
	February 24	Interdisciplinary Research Module	
7	March 1	Interdisciplinary Research Module	
	March 3	Interdisciplinary Research Wrap up with Dr. Jeffrey Olimpo	Interdisciplinary Research Module due
8	March 8	Setting the Stage for your Final Project	
	March 10	Final Project Research	"Starting your Project" Worksheet due
-	March 15	Spring Break	
	March 17	Spring Break	
9	March 22	Introduction to Backwards Design	
	March 24	Knowing your Audience with Alicia Chumley	Backwards Design worksheet due
10	March 29	Introduction to Assessment	
	March 31	Assessment Workshop	
11	April 5	Assessment Workshop cont.	"Assessment for your Project" Worksheet due
	April 7	Introduction to Curriculum Design and Project-Based Learning	
12	April 12	Curriculum Workshop	
	April 14	Curriculum Workshop cont.	"Curriculum for your Project" Worksheet due
13	April 19	Work on your Project!	
	April 21	Gallery Walk/Rehearse your Project	
14/15	April 26- May 5	Final Project Presentations	
	May 12 @ 10 am	Class Reflection	