

Syllabus PHYS 2997 Teaching of Physics Fall 2021

Course Information

CRN	21987
Location	104 Thaw Hall
Time	Friday 3:00 – 4:50 pm
Instructor	Russell J. Clark, Ph.D.
email	ruc2@pitt.edu
Phone	412-624-9204
Office	OEH 404
Office hours	Monday: 10:30am – 11:30am Tuesday: 4:30pm – 5:30pm Wednesday: 2:30pm – 3:30pm Thursday: 2:30pm – 3:30pm Friday: 7:00am – 8:00am

Other times by appointment: <http://tinyurl.com/Russell-Clark-Appointments>

Course Description and Goals

This is a mandatory course for all physics graduate students. The overall objective of this course is to prepare incoming graduate students for their duties as Teaching Assistants (TAs) and lay the foundation for any subsequent teaching role they may assume. This course will introduce students to the principles of learning and physics education research-based curricular and pedagogical approaches using concrete examples. There will be opportunity to reflect upon various aspects of the course and teaching and learning in general.

Upon completion of this course, you will:

- Learn basic teaching skills, such as effective public speaking, etc.
- Learn how to create a positive learning environment.
- Practice writing effective assessments, such as homework problems, exam questions, etc.
- Practice engaging with students outside of the classroom.
- Practice preparing and presenting a lesson, including peer reviews.
- Perform an observation of a faculty member teaching a class.
- Develop a teaching portfolio, including a teaching statement.

Canvas

The University of Pittsburgh provides an online portal for participating classes called Canvas. Here you will find your grades and relevant course materials.

<http://canvas.pitt.edu>

Schedule

Lecture	Date	Topic or Activity	Description	Homework
1 ZOOM	08/27	Introduction Lecture Survey	Student introductions Lecture on the basics of teaching	Pre-Teaching Survey
2 ZOOM	09/03	TA Training Module 1 Role-play	Socratic Questioning exercise Student/Instructor role-play exercises #1 & #2	
3 ZOOM	09/10	TA Training Module 2 Role-play	Learning Culture videos Student/Instructor role-play exercises #3 & #4	
4	09/17	TA Training Module 3 Role-play	Bias in the classroom Student/Instructor role-play exercises #5 & #6	
5	09/24	Lecture Role-play Problem Writing	Lecture on audience awareness Student/Instructor role-play exercise #7 Problem writing exercise #1	
6	10/01	Role-play Lecture Problem Writing	Student/Instructor role-play exercise #8 Lecture on grading Problem writing exercise #2	
7	10/08	Role-play Lecture Problem Writing	Student/Instructor role-play exercise #9 Lecture on new pedagogies Problem writing exercise #3	
	10/15	Fall Break	No class	
8	10/22	Presentations Discussion	Teaching presentations (3) Discussion on the Teaching Statement	
9	10/29	Presentations Problem Writing	Teaching presentations (3) Problem writing exercise #4	
10	11/05	Presentations Problem Writing	Teaching presentations (3) Problem writing exercise #5	
11	11/12	Presentations Problem Writing	Teaching presentations (3) Problem writing exercise #6	
12	11/19	Presentations Problem Writing	Teaching presentations (3) Problem writing exercise #7	
	11/26	Thanksgiving Break	No class	
13	12/03	Presentations Survey	Teaching presentations (3)	Post-Teaching Survey
14	12/10	Open discussion Letter	The discussion will be open to anything that you want.	Write a letter To a future Student.
	12/17	Final Exam Week	No class	

The shaded class meetings will be through Zoom. Use the link in Canvas under Zoom with the passcode 21987.

Grading

The course grade for this class is S/NC, which means pass (S) or fail (NC).

You will be given points (see the table below) for participation in and completion of the class assignments.

You will only receive a grade of S (pass) if your final score is 180 or above.

Note that you will only be allowed to makeup missed work if you have an excused absence. If you have to miss class due to illness or a family emergency then you may be asked for documentation, such as a note from your doctor. If you know that you will have to miss class due to attending a conference or some other compelling reason, then you should discuss this with the instructor ahead of time.

Assignment	Description	Points
Attendance	You will receive 10 points for class participation in each class meeting. If you show up for class, but do not participate then you may receive fewer than 10 points.	140
Teaching Portfolio Design and Teach a Lesson	You will choose a topic from introductory physics or astronomy and design a lesson plan. The lesson plan will be submitted to Canvas. You will teach your lesson to the class and your peers will provide feedback.	20
Teaching Portfolio Teaching Statement	You will write a teaching statement as part of your teaching portfolio and submit this Canvas.	20
Teaching Portfolio Faculty Observation	You will visit a class taught by a faculty member and write a summary of your observation which you will submit to Canvas.	15
Homework	Surveys and other assignments.	5
		200

Disability Services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services (DRS), 140 William Pitt Union, 412-648-7890, drsrecep@pitt.edu, 412-228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

Academic Integrity

Take time to read the information on “Academic Integrity” and be sure that you understand your responsibilities under the guidelines set out for The Dietrich School of Arts and Sciences, which are spelled out in full at <http://www.as.pitt.edu/fac/policies/academic-integrity>.

Statement on Classroom Recording

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student’s own private use.

Code of Conduct:

Communication is key to a productive learning environment, and we can maintain productive communication by exhibiting respect for one another. The success of the course for yourself and others depends on all of our commitment to behavior that demonstrates respect for differences, understanding towards others and a willingness to listen and learn. For these reasons, it is unacceptable to harass, discriminate against, or abuse anyone because of race, ethnicity, gender, disability, religious affiliation, sexual orientation, or age. If you

witness or are subject to such harassment, please report it to the instructor or to the Office of Diversity and Inclusion.

Title IX:

Legal text: “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.” As a professor, I am a mandatory reporter and I am required to report violations of Title IX that I observe, or am made aware of, to the Title IX office. Title IX violations include, but are not limited to, sexual harassment, sexual violence and verbal or sexual abuse. Within the classroom, behavior in violation might appear as suggestive jokes or innuendos, inappropriate touching, and unwanted sexual behavior or advances, but my capacity and obligation to report does not end at the classroom.

Useful Information

The following links and locations may be useful to you.

Resource	Location	Link
Campus Building Index		http://www.tour.pitt.edu/locations
Academic Resource Center	G-1 GSCC	https://www.asundergrad.pitt.edu/study-lab
Physics Resource Room	312 Thaw Hall	https://www.physicsandastronomy.pitt.edu/resource-room-information
Physics UTA Room	304 OEH	https://www.physicsandastronomy.pitt.edu/uta-help-room-304-oeh
Writing Center	317B O’Hara Student Center	http://www.writingcenter.pitt.edu/
Math Assistance Center	215 O’Hara Student Center	http://www.mathematics.pitt.edu/about/math-assistance-center
School of Arts and Sciences	Thackeray Hall	http://www.asundergrad.pitt.edu/
Advising Center	201 Thackeray Hall	http://www.asundergrad.pitt.edu/advising-center
Office of Student Records	140 Thackeray Hall	https://www.asundergrad.pitt.edu/student-records
Registrar	G-3 Thackeray Hall	http://www.registrar.pitt.edu/
Career Center	200 WPU	http://www.studentaffairs.pitt.edu/cdpa
Counseling Center	Suite 334 WPU	http://www.studentaffairs.pitt.edu/cchome
Campus Computing Labs		http://technology.pitt.edu/about-us/lab-locations-hours-and-equipment