DEPARTMENT OF PHYSICS
PHYX 1200
PHYSICS by HANDS-ON EXPLORATION

FALL 2018

Course Information

Textbook:	Class Notes available in bookstore - Required
Instructor	Tonya Triplett, SER 234, 797-8308, tonya.triplett@usu.edu
Classroom	ESLC 130
Time	10:30-11:45 Tuesday and Thursday
	Lab as registered
Office hours	T/H 1:30-3:30 and by appointment
Website	Use USU's Canvas program

Course Goal

The goal of this course is to acquaint you with some of the "big ideas" in physics, to let you see those ideas in action in your own experimentation, and to convince you that physics can (at least some of the time) be fun. The course will also attempt to acquaint you with some of the major players in science, the people who came up with the big ideas, how they did it, and how and on what scientists are working today.

Tests

This course will have four exams over four general areas. These tests will be given in class as listed on the calendar. Each one is equally weighted such that tests will comprise 60% of the total points in the course. Tests will be in written format, will cover concepts, labs, and problem solving. The last test will be given as the scheduled final and will NOT be comprehensive.

Homework

Homework will be assigned approximately weekly. Each homework assignment will be graded out of 20 points. Homework will be worth 20% of the total score. 13 assignments will be given; you may drop your two lowest scores. Assignments are listed on the calendar. The answers to homework will be posted on Canvas, so late homework will not be accepted.

Labs

Labs are your chance to "try it out". They will be held in SER 110 during your scheduled lab time. A total of 9 labs will be held during the semester and you will drop your lowest score. You will receive credit for attendance and for an exit quiz. All labs will be graded out of 25 points. If you miss your lab section, you may be able to attend another section during that week. Lab points will comprise 20% of the total score.

Journal

At the beginning of each class there will be a thought question about the previous or current day's material. Students will answer these questions in a journal format. This completed journal may be turned in at the end of the course for up to 2.5% of extra credit. (These points will be recorded as test points meaning each day of journal is one test point.) The intent of the journal is to measure and encourage attendance.

Composition of Final Grade

Chapter Tests	60%	
Homework	20%	
Labs	20%	
Question Journal	0%	up to 2.5 %
Total	100%	up to 102.5%

The assignment of letter grades will be as shown in the table below:

Letter grade	A	A-	B+	B	B-	C+	C	C-	D+	D
Percent Score	94.0	90.0	87.0	84.0	80.0	77.0	74.0	70.0	67.0	60.0

The scores represent the lower bound for the adjacent letter grades. Marks of 59.9% and below will be graded F.

Undergraduate Teaching Fellow (UTF)

This class is scheduled to have a UTF to assist individuals or groups. More information about times and contact will be given soon. Another UTF will assist with materials, grading and classroom projects.

Lab Fee

A lab fee has been assessed for this course to pay for lab materials and upkeep. It should have been paid at registration.

Materials for Persons with Disabilities

USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) as early in the semester as possible (University Inn # 101, 435-797-2444, drc@usu.edu). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

Honor Code

The honor code will be strictly enforced in this course. Any suspected violations of the honor code will be promptly reported to the honor system. For more information please visit: http://www.usu.edu/policies/PDF/Acad-Integrity.pdf

Course Calendar

All calendar dates are tentative and may be changed to meet course objectives.

Date	Course Material	Homework Due	Assigned Numbers
Aug 27-31	**No lab this week**		
Aug 28	Chapter 1, course information		
Aug 30	2-1 through 2-9		
Sep 3-7	**Lab 1**	**Race Tracks* Monday lab meets the following week**	
4	2-10 through 2-16		
6	3-1 through 3-5	Homework #1	Chapter 2: 1,2,3,5,7
Sep 10-14	**Lab 2**	**Force Carts* Monday lab meets the following week**	
11	3-6 through 3-9		
13	4-1 through 4-6	Homework #2	Chapter 3: 2,4,5,6,7
Sep 17-21	**No Lab**	**Exam Week**	
18	4-6 through 4-11		
20	**Exam 1**	Homework #3	Chapter 4: 2,5,7,10
Sep 24-28	**No Lab**		
25	5-1 through 5-5 Gravity		
27	5-5 through 6-2 Energy	Homework #4	Chapter 5: 1,2,3
Oct 1-5	**Lab 3**	**Roller Coasters**	
2	6-3 through 6-7 Energy Conservation		
4	6-8 through 6-9 Machines, Power	Homework #5	Chapter 6: 1,3,10,13
Oct 8-12	**Lab 4**	**Heat and Machines**	
9	6-9 through 6-11 Heat	Homework #6	Chapter 6: 14,15,16 (all parts)
11	6-12 through 6-14 Momentum, Entropy		
Oct 15-19	**No Lab**	**Exam Week**	
16	**Exam 2**	Homework #7	Chapter 6: 5,8,9,11
18	7-1 through 7-4 Charge		
Oct 22-26	**Lab 5**	**Sew Electric**	
23	7-5 through 7-9 Voltage		
25	7-10 through 7-14 Ohm's Law	Homework #8	Chapter 7:1,2,3,4
Oct 29-Nov 2	**Lab 6**	**Electricity**	
30	7-15 through 7-18 Series/Parallel Circuits		
Nov 1	Circuits continued	Homework #9	Chapter 7: 5,6,7,8,9,10
Nov 5-9	**No Lab**	**Exam Week**	
6	7-18 through 7-25 Power and Magnetism		
8	**Exam 3**	Homework #10	Chapter 7: 11,12,13,14,15,16
Nov 12-16	**Lab 7**	**Waves and Music**	
13	8-1 through 8-7 Waves		
15	8-8 through 8-11 resonance	Homework #11	Chapter 8: 1,2,3
Nov 19-23	**No Lab**		
20	8-12 through 8-14 Light		
22	**Thanksgiving- No Class**		
Nov 26-30	**Lab 8**	**Light**	

27	8-14 through 8-16 Optics	Homework #12	Chapter 8: 4,5,6,7
29	9-1 through 9-5 Radiation		
Dec 3-7	**Lab 9**	**Do not go to lab sessions**	Radioactivity
4	(Lab 9 in class this day)		**Journal Due Today**
6	Health Effects of Radiation	Homework #13	Chapter 9: 1,2,3,4
Dec 10-14	**Finals Week**		
Tue Dec 11	**Final Exam**	**9:30-11:20 in our regular classroom**	