

**DEPARTMENT OF PHYSICS
PHYX 1200
PHYSICS by EXPLORATION**

FALL 2009

Course Information

Textbook: Class Notes available in bookstore - Required
Instructor: Tonya Triplett, SER 234, 797-8308, tonya.triplett@usu.edu
Classroom: WIDT 007
Time: 10:30-11:45 Tuesday and Thursday
Lab as registered
Office hours: by appointment – T/H 1:30-3:00
Website: Use USU's Blackboard Vista 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 will be worth 150 points 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 on December 8 at 11:30AM and will NOT be comprehensive.

Homework

Homework will be assigned approximately weekly. Each homework assignment will be worth 20 points. Homework will be worth 200 points of the total score or 20%. More than 10 assignments will be given so you may drop your two lowest scores. Assignments are listed on the calendar. The answers to homework will be posted on Blackboard, 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 8 labs will be held during the semester and you will need to attend them all. You will receive credit for attendance and for an exit quiz. A total of 25 points per lab is available. If you miss your lab section, you may be able to attend another section during that week. Lab points will comprise 200 points of the total score or 20%.

Journal

At the beginning of each class there will be a thought question about the previous 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 as extra credit worth up to 25 points.

Composition of Final Grade

Chapter Tests	60%	600 points
Homework	20%	200 points
Labs	20%	200 points
Question Journal	0%	up to 25 points

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
% 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% and below will be graded F.

Supplemental Instruction (SI)

This class is scheduled to have a Supplemental Instructor (SI) to assist individuals or groups.

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

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444 voice, (435)797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Course Calendars

Course Schedule

Date	Homework	Material Covered
Aug 25		Chapter 1, Course Information, Introduction
27		2-1 through 2-9 Structure of Matter
Sept 1		2-10 through 2-16 Quarks, Bulk Properties
3		3-1 through 3-5 Position, Velocity, Acceleration
8	**1	3-6 through 3-9 Graphing
10	**2	4-1 through 4-6 Newton's Laws
15		4-6 through 4-11 Multiple Forces
17	**3	Exam 1
22		5-1 through 5-5 Gravity
24	**4	5-5 through 6-2 Energy
29		6-3 through 6-7 Energy Conservation
Oct 1	**5	6-8 through 6-9 Machines, Power
6**6		6-9 through 6-11 Heat
8		6-12 through 6-14 Momentum, Entropy
13	**7	Exam 2
15		Fall Break - attend Friday Classes this day
20		7-1 through 7-4 Charge
22		7-5 through 7-9 Voltage
27		7-10 through 7-14 Ohm's Law
29	**8	7-15 through 7-18 Series/Parallel Circuits
Nov 3		7-18 through 7-25 Power and Magnetism
5	**9	Exam 3
10		8-1 through 8-7 Waves
12		8-8 through 8-11 Light
17	**10	8-12 through 8-14 Optics
19		8-14 through 8-16 Optics
24	**11	9-1 through 9-5 Radiation
26		Thanksgiving Holiday
Dec 1		Health Effects of Radiation (hand-out)
3		9-6 through 9-7 Fission and Fusion
Dec 8	**12	Final Exam 11:30-1:20

**Homework is due this day

Homework Assignments

Number	Page in notes	Problem Numbers	Due Date
1	2-11 2-15	2,3,4 1,3	Sept 8
2	3-9	2,4,5,6,7	Sept 10
3	4-10	2,5,7,10	Sept 17
4	Handout	Given in class(WEB)	Sept 24
5	6-14	1,3,10,13	Oct 1
6	6-14	14,15,16	Oct 6
7	6-14	5,8,9,11	Oct 13
8	7-16	1-5 (Both parts of 5)	Oct 29
9	7-18 7-25	1,2,3 1,2	Nov 5
10	8-16	1,2,3	Nov 17
11	8-16	4,5,6,7	Nov 24
12	9-5	1,2,3	Dec 8

LAB SCHEDULE

Date	Lab
Aug 24-28	No Lab
Aug 31- Sept 4	1. Race Tracks
Sept 7-11	2. Force Carts*
Sept 14-18	No Lab (Monday labs only – Lab 2)
Sept 21-25	No Lab
Sep 28-Oct 2	3. Roller Coasters
Oct 5-9	4. Heat and Machines
Oct 12-16	No Lab
Oct 19-23	No Lab
Oct 26-30	5. Electricity
Nov 2-6	No Lab
Nov 9-13	6. Waves and Music
Nov 16-20	7. Light
Nov 23-27	Thanksgiving Holiday – No Labs
Dec 1	8. Radioactivity**

*Monday is Labor Day, so Monday Labs meet Sept 14 for Lab 2.

**This lab will be completed DURING CLASS on December 1. No makeup will be available.

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