

PHY 152

**Department of Physics
Physics I Lab**

Spring 2019

Instructor: Peter Ehni

Office: Don 111B

Office hours: MWF 12-1 and other times by appointment

Required Materials: A 3-ring (1in) binder, scientific calculator, ruler, and physics text

Class Time and Place: D109, Wednesday 3:00pm-4:50pm

Course Description: Experiments designed to supplement the lecture course and to provide proficiency in the methods of measurement, the analysis and presentation of data and the interpretation of results. Co-requisite: Phy 151

Credits: 1 semester hour

Lab Topics: There will be eleven or twelve lab assignments. The assignments will be explained at the beginning of each lab period. The lab should be completed during the lab period. Final data analysis and lab write up may need to take place outside of the lab period. The lab must be completed by the following Monday at 5pm. All lab materials – data, analysis, graphs, etc must be placed in your 3-ring binder.

Tentatively, the lab assignments are:

- Lab 1: Measurement and Data Analysis
- Lab 2: Picket Fence Free Fall
- Lab 3: Kinematics: Constant Acceleration – Cart on a Ramp
- Lab 4: Vectors: Force Tables
- Lab 5: Kinematics: Constant Acceleration – Fan Cart
- Lab 6: Newton's Second Law with Carts
- Lab 7: Friction
- Lab 8: Atwood's Machine
- Lab 9: Air Resistance with Coffee Filters
- Lab 10: Impulse and Momentum with Carts
- Lab 11: Ballistic Pendulum
- Lab 12: Collisions in 2D

Attendance: Students are expected to attend all labs. It is hard to collect data if you are not in lab. Because the lab is also used for other labs it is very hard to make up a lab. You are permitted one absence from lab but are responsible for the lab you missed. See academic integrity below.

Academic Integrity: Plagiarism or cheating makes a student liable for an F on that lab and possibly an F for the course. Copying someone else's data is cheating. You should have the same data as your lab partner (that's not cheating) because you took the data together. If you miss lab you have no lab partner that day and must collect the data yourself. Students should refer to the student handbook for a complete description of academic integrity.