

PHY 242

Department of Physics  
College Physics II Lab

Spring 2019

**Instructor:** Dr. Peter Ehni

**Office:** D-111B x-2433

**Office hours:** may be found on the web (<http://www.wju.edu/facultyschedules.asp>). Just click on my name to bring up my schedule. You may also make appointments via phone or email. I am very flexible, so just stop by and see if I'm around. If I'm in I can usually make time for you. I will normally be around between 11:30 and 1.

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

**Class Time and Place:** D109, Wednesday 6:00pm-7:50pm

**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: Phys 241

**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: Calorimetry: Specific heats of metals
- Lab 2: Calorimetry: Latent Heats of Water
- Lab 3: Newton's Law of Cooling
- Lab 4: SHM - Pendulum
- Lab 5: Standing Waves on a String
- Lab 6: Resonance of Sound; Tube open at one end
- Lab 7: Focal Length of a simple lens
- Lab 8: Snell's law: Index of Refraction
- Lab 9: Equipotentials and Electric Fields
- Lab 10: Ohm's Law
- Lab 11: Power Usage of Common Electronic Devices
- Lab 12: Magnetic Field due to a Coil of Wire

**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.