

Physics 290: “Foundations of Physics Laboratory”

Instructor: Prof. Stephanie Majewski – smajewsk@uoregon.edu

Office Hours (402 Willamette): Tuesdays 11am–12pm, or by appointment

GE Contact Information and Office Hours:

Francesco Arceri (farceri@uoregon.edu) M 2-3pm, WIL 373 (Drop-in: W 2-3pm)

Brittany Carter (bcarter4@uoregon.edu) Th 2-3pm, WIL 219 (Drop-in: M 10-11am)

Marija Glisic (mglisic@uoregon.edu) F 11am-12pm, WIL 218 (Drop-in: M 11-12pm)

Philippe Nguyen (pnguyen@uoregon.edu) F 1-2pm, WIL 315 (Drop-in: M 3-4pm)

UTAs: Hannah Liss (hliiss@uoregon.edu), Eli Meyer (elijahm@uoregon.edu),

Ry Miller (rylandm@uoregon.edu)

Course (CRN 34791):

Lectures: Tuesdays 10:00-10:50am in 110 Willamette

Lab Sections: Thursdays 10-11:50am, 12-1:50pm, 2-3:50pm, 5-6:50pm in 17 WIL

Corequisite: Physics 253; Textbook: none

Overview: This course is taught as a companion to the Foundation in Physics I sequence (Phys 251-253), and covers the topics of electricity and magnetism. While this course is designed to support the material presented in Physics 253, this laboratory course is a separate class with separate goals.

Course Goals:

1. Explore the basic principles encountered in the Foundations of Physics I course in a laboratory setting.
2. Undertake investigation by inquiry. Devise experiments to obtain useful quantities for solving problems.
3. Gain experimental skills in error analysis, error propagation, and estimation.
4. Practice extracting data from graphs and instruments.
5. Practice thinking critically and quantitatively about the world around us.

Lecture Format:

- Discuss the upcoming lab (and any problems with the previous lab)
- Work example problems, using LearningCatalytics for participation
- Bridge the gap between equations on a page and the physical world

Laboratory Format:

- *Print* out the lab from Canvas before class
- Turn in the pre-lab at the start of class
 - It is called a *pre-lab* is because it should be done *before* you walk into the lab
 - Late pre-labs will not be accepted
- Work in groups (ideally 3 people)
- Write up the lab report and answer questions

- Completed lab reports are due at **10:00am the following Monday**
- Turn in to the Homework box (near Willamette Room 009)
- A 24-hour grace period may be used once / term (except on the final lab)

Lab Attendance:

Attendance at every lab section is essential. However, if you must miss lab (due to illness, e.g.) you must inform the instructor by email. You are allowed to make up maximum one (1) lab during the term. This makeup lab must occur within one (1) week of the original lab, pending the availability of the instructor or a GTF.

Course grade:

Lecture Participation:	5%
Pre-labs:	15%
Lab reports and questions:	60%
Final lab report:	20%

Final Grade:

A	90% to 100%
B	80% to 90%
C	70% to 80%
D	60% to 70%
F	lower than 60%

Course Website:

At <https://canvas.uoregon.edu> you may login and access course documents such as this syllabus. In addition, you may view announcements, course materials, and scores on laboratory worksheets at any time.

Student Conduct:

Mutual respect in class is paramount. Academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism, devalues the reputation of our institution, its faculty, its students, and the degrees we offer**. Moreover, academic misconduct is particularly unfair for the students who do their work with integrity and honor. Violations of the student conduct code result in the incident being included on your student conduct record and can result in a failing grade on any course work related to the violation or a failing grade in the course.

Every effort will be made in this class to deter dishonesty through classroom procedures. **Suspected academic dishonesty will be reported.**

**For a list of other descriptions of cheating, see the [Student Conduct Code](#).

Special Accommodations:

The AEC (Accessible Education Center) exists to help students achieve access to educational resources (<http://aec.uoregon.edu>). If you anticipate needing special accommodation in Physics 290 please contact me *as soon as possible* so we may discuss your situation.

Physics 290 - *Tentative* Course Schedule

Week 1	Tu Th	Apr Apr	3 5	Lecture No lab this week
Week 2	Tu Th	Apr Apr	10 12	Lecture Lab: Electric Fields I
Week 3	Tu Th	Apr Apr	17 19	Lecture Lab: Electric Fields II
Week 4	Tu Th	Apr Apr	24 26	Lecture Lab: Capacitors
Week 5	Tu Th	May May	1 3	Lecture Lab: Circuits I
Week 6	Tu Th	May May	8 10	Lecture Lab: Non-uniform Conductors
Week 7	Tu Th	May May	15 17	Lecture Lab: Circuits II
Week 8	Tu Th	May May	22 24	Lecture Lab: Magnetic Fields
Week 9	Tu Th	May May	29 31	Lecture Lab: Inductors
Week 10	Tu Th	Jun Jun	5 7	Lecture Lab: Final Lab
Week 11	Tu	Jun	12	Final Lab Report due by 10:00am

The given schedule is tentative; changes will be discussed in class and posted online.

Important Dates: ([academic calendar](#))

Apr 9th	Last day to drop without a "W"
Apr 11th	Last day to add a class
May 20th	Last day to withdraw (drop with a "W") or change grading option to P/N