



UAF Introductory Physics Laboratory

PHYS212

COURSE DESCRIPTION

Students will meet for a 3 hour lab session each week and work with a partner(s) to complete an experiment related to content from the lecture portion of the class. Equipment setup and takedown, as well as the data analysis and lab writeup will occur during this 3 hour block of time.

COURSE GOALS

- *Set up and troubleshoot scientific equipment*
- *Develop measurement techniques*
- *Analyze data and calculate physical quantities*
- *Apply physics concepts to determine the validity of experimental results*
- *Collaborate and communicate effectively*

STUDENT LEARNING OUTCOMES

- *Students can troubleshoot the experimental apparatus*
- *Students can identify possible sources of error and relate those sources of error to their experimental procedure*
- *Students can adjust the experimental procedure to collect data most effectively*
- *Students can clearly explain their experimental results within a larger context*
- *Students share responsibility within the experimental procedure*



INSTRUCTOR INFORMATION

Zak Tourville
Office: Reichardt 114
Office hours: Friday 11am - 1pm

I promptly respond to emails between 8am-5pm, Monday-Friday. Anyone can ask lab or homework questions in my office hours. Please reach out if you need assistance

CLASS MEETINGS

PHYS212 Labs meet in Reichardt 257

*001: Monday 2:15-5:15pm
002: Tuesday 9:30-12:30
003: Wednesday 2:15-5:15pm
004: Thursday 2:15-5:15pm
006: Monday 6-9pm*

COURSE READINGS/MATERIALS

- *Pencil or pen.*
- *Calculator.*
- *Your written work will be submitted electronically, so you will need access to a scanning device or app.*
- *The Lab Manual for the week will be posted on Canvas. You are required to read through the lab and complete the pre-lab quiz before attending.*

TECHNICAL REQUIREMENTS FOR COURSE

Lab reports will be submitted electronically. You will need to be able to scan your written work and upload a PDF file to Canvas.

INSTRUCTIONAL METHODS

The physics concepts necessary for labs will be covered in the lecture portion of the class, as well as in the “theory” section of the lab manual. Instructional videos are available covering general experimental methods such as measurement techniques, error analysis and the use of graphing software. Your TA will go over safety, data collection and troubleshooting in a brief intro before every lab.

To prepare for each lab you should read the lab manual beforehand. You should know the title of the experiment, what you’ll be trying to investigate/demonstrate/calculate, and what type of measurements you will collect. The introductory videos are recommended but not mandatory.

COURSE POLICIES

As a physics lab course, [safety](#) and scientific rigor are our priorities.

- You will work collaboratively, but your writeup should be your own words
- Use your own data and observations to draw conclusions
- Read the lab manual and complete the pre-lab quiz before attending lab
- Adhere to all lab-specific safety rules and TA recommendations
- Notify your TA of any accident or unsafe condition
- Treat all people in the lab with respect
- Accept responsibility for your own actions
- Wear closed toed shoes at all times
- Use of headphones is prohibited
- Keep all food and drink outside of the laboratory (this includes closed water bottles)
- No one who appears under the influence of alcohol or drugs will be permitted in the lab
- No children or visitors will be permitted in the lab
- You are expected to remain in lab until you have completed the lab exercise, submitted your work, and cleaned up your station
- If your TA determines your behavior to be unsafe or disrespectful, they may ask you to leave. If you disagree with the TA's assessment you may speak with the lab supervisor or physics department chair, but you must leave lab immediately

Attendance & Tardiness

- **All labs are required in order to pass the course (combined lecture and lab).** In the case of an absence, the missed lab must be made up or you will fail the course.
- You must attend the lab session in which you are enrolled (example, F01). You may not just show up to another lab session.
- If you are or will be absent, email the lab supervisor (ztourville@alaska.edu) and your TA as soon as possible to schedule your makeup. Your TA cannot schedule this for you.
- If you are late to your lab and you have missed the safety introduction your TA may ask you to leave. Please do not be late to your lab.

Academic Integrity

Your academic honesty is assumed, which means that we expect all of your submitted work to have come from your brain and your hand. If you've submitted the work of someone else, in whole or in part and without proper citation, we will not accept the assignment. Within academic communities, plagiarism represents a serious breach of trust and can carry severe consequences, including disciplinary action. (source: Magazine Syllabus Template, UAF ecampus)

Late Work

It is expected you will complete and submit your lab within the 3 hour timeframe. You will be allowed an additional day if you have been in lab working for 3 hours but need extra time, after which a late penalty will apply. Please contact the lab supervisor immediately if this is an issue. (ztourville@alaska.edu).

Canvas will deduct 10% of your score per day for any work submitted late.

Instructor Response Time

Questions through email will receive responses within 24 hours (Monday-Friday). TA's should have lab reports graded by the following week. To receive an immediate response to a question, please attend office hours or homework help.

SUPPORT SERVICES

Homework Help Room: *The Physics department sponsors homework help in Reichardt room 122. Any physics student may drop in at any time a TA is available. You may ask questions regarding your lab here as well. HW help hours are posted on the course home page (Canvas).*

Office Hours: *Attending office hours is strongly encouraged (In general, this should be your first step if you are struggling in a class: Talk to your instructor before you search the internet for answers!) Hours are posted on the course home page (Canvas). **Students may attend office hours of any of the TAs and Zak.***

Noyes Lab Access:

Every student enrolled in a physics course is given access to the Noyes Computer Lab in REIC 101. Computers with logger pro software, a scanner and a printer are available here. You may access the room by swiping your PolarExpress card. If you are unable to gain access to the room, please contact Ms. Ellen Craig, Physics Office Manager, in the physics front office (REIC 102), or at eacraig@alaska.edu.

UAF eCampus Student Services

Student Services helps students with registration and course schedules, provides information about lessons and student records, assists with the examination process, and answers general questions. Our Academic Advisor can help students communicate with instructors, locate helpful resources, and maximize their distance learning experience. Contact the UAF eCampus Student Services staff at 907.455.2060 or toll free 1.800.277.8060 or contact staff directly – for directory listing see: <http://ecampus.uaf.edu/contact>

Office of Information Technology Help Desk

Go to <http://www.alaska.edu/oit/> to see about current network outages and news.

Reach the Help Desk at:

- e-mail helpdesk@alaska.edu
- fax: 907.450.8312
- phone: 450.8300 (in the Fairbanks area) or 1.800.478.8226 (outside of Fairbanks)

UAF Writing Center

[The writing center](#) offers writing tutoring to students, staff, faculty and the wider community in any discipline, 6 days/ week. They also offer [phone tutorials](#).

CTC Learning Center

The Learning Center offers tutoring in writing and math. For hours of operation and information about [online tutoring](#) for writing, check [their website](#).

UAF Math Lab

The [math lab](#) offers tutoring to students at all levels.

UAF Library

The Rasmusen Library [reference help desk](#) is available to assist students with library research and other questions.

Disabilities Services

The **UAF Office of Disability Services** operates in conjunction with UAF eCampus. Disability Services, a part of UAF's Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services.

If you believe you are eligible, please visit their web site (<http://www.uaf.edu/disability/>) or contact a student affairs staff person at your local campus. You can also contact Disability Services on the Fairbanks campus by phone, 907.474.5655, or by e-mail (uaf-disabilityservices@alaska.edu)

EVALUATION POLICIES (Lab portion of PHYS123)

Activity/Assignment	% grade	Due Date
Lab Writeup / Lab Report	80%	Within 24 hrs of your lab time
Pre-Lab Quiz	20%	Due before you enter lab.

What is a quality lab writeup?: The most common mistake students make is to not include enough detail. A quality lab writeup includes:

- Complete sentences
- Units for all quantities listed
- Labels on plots, diagrams and tables
- Descriptions of calculations in addition to numbers and equations
- Examples [can be found here](#)

How will the lab writeup be graded?:

A rubric used by the TAs in grading lab reports/writeups [can be found here](#)

TITLE IX PROTECTION

University of Alaska Board of Regents have clearly stated in BOR Policy that discrimination, harassment and violence will not be tolerated on any campus of the University of Alaska. If you believe you are experiencing discrimination or any form of harassment including sexual harassment/misconduct/assault, you are encouraged to report that behavior. If you report to a faculty member or any university employee, they must notify the UAF Title IX Coordinator about the basic facts of the incident.

Your choices for reporting include:

- 1. You may access confidential counseling by contacting the UAF Health & Counseling Center at 474-7043;*
- 2. You may access support and file a Title IX report by contacting the UAF Title IX Coordinator at 474-6600;*
- 3. You may file a criminal complaint by contacting the University Police Department at 474-7721.*

COURSE SCHEDULE

Our weekly lab schedule can be found on the Canvas course homepage.

We look forward to working with you this semester.