

**Principles of Physics II  
Laboratory Syllabus  
Spring 2020  
Texas Tech University**

**Laboratory Instructor:** \_\_\_\_\_  
**Section:** \_\_\_\_\_

**Laboratory Director:**

Dr. Keith West

Office: SC 120A

Office Hours: 10:00–10:45 a.m MTR or by appointment.

Phone: 806-834-3651

Email: [keith.h.west@ttu.edu](mailto:keith.h.west@ttu.edu)

**Laboratory Manual:** *Investigations and Explorations in Experimental Physics Volume 2: Electricity, Magnetism, and Optics*. The manual is available from both Barnes and Noble and Varsity.

**You must have a lab manual to attend lab. This includes the first lab. If money is going to be a problem, you need to contact Dr. West BEFORE the first lab. Otherwise financial issues will not be accepted as an excuse for not having the manual.**

**Meeting Place:** Science Building 119 or Science 104 **PHYS 2401 Labs meet in two different rooms this semester.** Please make sure you show up to the correct room.

**Note:** No food or drinks are allowed in the laboratory, including bottles and cups with lids.

**Laboratory:** Each laboratory meeting will consist of working through one of the interactive laboratories in the lab manual. Topics include electricity, magnetism, and optics. The laboratory and homework will be graded.

**Laboratory homework:** Most weeks, a laboratory homework will be assigned. Laboratory homework will be emailed to all students in advance of the lab it covers.

- Homework is to be completed after (not in advance of) you have done the lab over which it covers and will be **turned in the following week at the beginning of the laboratory period**. It is late after the beginning of the laboratory period and late laboratory homework will not be accepted. The laboratory homework will count as 35% of your laboratory grade.
- Students who are found working on lab homework in the hall after lab begins will be given an unexcused absence for that lab, and their homework will not be accepted.

**Laboratory Write-up:** The lab write-up will be completed each week as you answer the questions while working through the lab, as well as completing the summary at the end of the lab.

You will turn in the write-up at the end of each lab period. The laboratory write-up is 50% of your laboratory grade.

**Participation:** Coming to class on time, not leaving early and being “on-task” when you are in the lab counts as part of your participation grade.

Obviously attendance is the most important part of participation. If you aren’t here, you can’t participate. Absences fall into two broad categories: expected absences and unexpected absences.

- **Expected Absences:** These are absences that you know you will have in advance. They include but are not limited to university sponsored trips and events (athletic events, conferences, etc.), doctor/dentist appointments, court appearances (plaintiff, defendant, witness, juror), religious observances, and other things that require advanced planning. **Please note: This includes the Engineering Job Fair.**
- University policy states that students are responsible for any work missed for university sponsored events. In the Physics Department, this means that a lab missed for a university sponsored event must be made up if possible. University policy also states that instructors must be notified in advance of absences due to university sponsored events. Instructors must also be notified in advance for absences due to religious observance.
- Therefore the absence policy for expected absences of any sort is the following: **In the event of an absence known in advance, students must make arrangements for a makeup lab and those arrangements must be made in advance of the absence.** The makeup can take place either before or after the absence, but the arrangements must be made in advance. Because many labs are at capacity and a few are over capacity, available seats are somewhat limited.
- **All arrangements for a makeup lab must be made through Dr. West, the lab director. Your TA does NOT have the authority to approve a makeup lab.** The reason for this policy is to make sure there is space for you in the lab you attend for the makeup and to make sure the makeup policy is applied consistently. Please email Dr. West; he will work with you to find a section that works with your schedule. He will also confirm the makeup and CC both your regular TA (to ensure the TA is aware of the makeup and won’t count the absence against you) and the TA of the section you’ll be attending for the makeup (to ensure that you are admitted to the lab). Please also note that the TA will not allow you to makeup the lab without prior approval from Dr. West. Make sure you receive confirmation from Dr. West that you have been approved for a makeup. There are roughly 2000 students in labs this semester, and it is possible for someone to fall through the cracks. Neither Dr. West nor you want that to happen.

Unexpected Absences: These are absences which occur when “life happens.”

- Unexpected absences include but are not limited to illness, death of a family member or close friend, car accident (either directly involved or stuck in traffic if it’s a major

wreck), and other unexpected events. Dr. West understands that things can happen that are beyond your control.

- In the event something unexpected prevents you from attending class, please contact Dr. West as soon as you can. If possible he will help you find a section in which to makeup the absence. In the event you can't make up the lab, he may excuse it. Please be advised that being excused for unexpected absences is at Dr. West's discretion, and he may ask for documentation, such as a doctor's note, funeral program, police report, or other supporting material.
- **In the event of an unexpected absence, you have one week from the date of the absence to contact Dr. West (not your TA). After that, the absence will be unexcused and the zero will count.**

Absences for the following reasons will **not** be excused under **any** circumstances so don't bother asking:

- Oversleeping
- "I forgot"
- Exams in other classes that are scheduled during your lab period. See below that addresses this for further details.
- SI sessions or study sessions for other classes
- Long weekends/family trips. This includes anything that arises while traveling such as car trouble, airline delays or flight cancellations, etc.
- "The bus was late". While this does happen, there is no way for me to verify a particular bus was late. It is your responsibility to make sure you are at lab on time, so if you have an early lab or take a bus that is frequently behind schedule, I suggest you make alternate plans on getting to school.
- **Students who show up to lab without a lab manual will not be allowed to attend lab;** we don't have enough open seats

If you are going to be absent for any reason not directly addressed above and wonder if the absence will be excused, please do not hesitate to contact Dr. West. He recognizes that occasionally a unique opportunity presents itself. The worst he will say is no, but sometimes he will excuse the absence.

Students are expected to arrive on time and be prepared to begin work when the lab starts. Please keep in mind that if someone is late, that person's group will have to catch that individual up. This can result in the group not finishing the laboratory activity, and as a result everyone's grade suffers. Therefore, students arriving more than about 10 minutes late will not be admitted to lab.

**NOTE: The TA has final say whether a student is admitted or not when they are late. Dr. West will not overrule the TA in these situations, so don't ask him.**

Dr. West recognizes that from time to time things happen which can delay someone. If something beyond the student's control occurred to prevent the student from arriving on time, a makeup lab without penalty can be arranged at Dr. West's discretion. Students who are late on a consistent basis will be given a warning to be on time. If that person continues to be late, he/she will not be admitted to lab and will not be allowed to make up that lab.

After attendance, conducting the investigation, taking part in class discussions, and group work in recitation/discussion are the most important parts of participation. If you do these things, you should be fine. Participation points will be lost if you socialize, play with lab equipment, fail to take part in group work, or are otherwise not on task.

**NOTE: Cell phone usage or other violations of the lab rules that result in a student being dismissed will carry a 10% reduction in the participation grade in the course and a zero on all work for that day.**

**Important Note About Out of Class Exams for Other Classes and SI Sessions:** Over the last few semesters, I have been approached by students wanting to make up a lab due to an instructor in another course scheduling an out of class exam after the semester starts at the time the student is scheduled to be in lab. **This is not an acceptable reason for missing lab and will not be excused nor will a makeup lab be approved.** We simply don't have the open seats to accommodate such requests. University policy requires out of class exams to be scheduled before registration opens for that semester in order to prevent such conflicts. If an instructor schedules an out of class exam after the semester begins, that instructor must make accommodations in the event of schedule conflicts, not the instructor of the scheduled class.

Your active participation in lab and recitation will each count as 15% of your grade.

**Tentative list of laboratory experiments:**

Week	Lab
January 13	No lab
January 27	No lab – MLK Day
January 27	Electrostatic Forces and Coulomb's Law
February 3	Electric Fields
February 10	Electric Potential
February 17	Electric Circuits I
February 24	Electric Circuits II
March 2	Electric Circuits III
March 9	Capacitors
March 16	No lab – Spring Break
March 23	Magnetism I: Magnetic Fields
March 30	Magnetism II: Forces on a Current-Carrying Wire
April 6	Magnetism III: Faraday's Law and Induction
April 13	No lab - Easter
April 20	Reflection and Refraction
April 27	Lenses and Mirrors
May 4	No lab

Please note the above sequence is tentative and subject to modification. Also, please note that the capacitor lab occurs earlier in the sequence than it appears in the manual.

**Grading:**

Laboratory write up	50%
Laboratory homework	35%
Participation	15%

**Academic Integrity and Student Conduct:**

Students are expected to comply with all provisions in the Code of Student Conduct. This includes following reasonable instructions, such as those contained in the lab policies, and observing standards of academic integrity. If you aren't sure what that means, ask me. I'll be glad to explain and give examples. I would rather do that than deal with a possible violation of the Code. Students whose conduct may violate the Code for either behavioral reasons or academic dishonesty will be referred to the Office of Student Conduct. In the event the Office of Student Conduct finds the student in violation of the Code, in addition to any University sanctions, an academic penalty up to and possibly including failing the lab portion of the class will be imposed.

[TTU OP 34.12](#) outlines grading policy as well as the definitions of scholastic dishonesty; all of which will be followed in all aspects of this course.

Excerpt: *"It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension. 'Scholastic*

*dishonesty' includes, but [is] not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts and any act designed to give unfair academic advantage to the student [...]"*.

#### **ADA Statement**

In compliance with the ADA, TTU OP 34.22 and TTU OP 10.08

*"Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as possible to make necessary arrangements. Students must present appropriate verification from Student Disability Services during the instructor's office hours. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact Student Disability Services office in 335 West Hall or call 806-742-2405."*

#### **Religious Holiday**

Pursuant of TTU OP 34.19, a student who intends to observe a religious holy day should make that intention known, in writing, to the instructor prior to an absence. A student who is absent from a class, exam or exercise for the observance of a religious holy day shall be allowed to complete an assignment or exam scheduled for that day within a reasonable time after that absence.