

PHYSICS 1420

Summer 2019 Theoretical Laboratory Experiments Syllabus

Failure to read the syllabus will not be an excuse for an exception to any policy stated within the syllabus.

The **objectives** of the **Theoretical Laboratory Experiments (TE's)** are for you to

- Gain **conceptual** understanding of fundamental physics.
- Gain **operational** understanding of physical quantities.
- Be able to **interpret**, in simple but clear language, representation of physical quantities such as numbers, equations and diagrams.
- Be able to solve physics problem via interactions with other students and teaching assistants (TA's).

Theoretical Laboratory Experiments Announcements: All announcements regarding the theoretical lab experiments will be posted on *Canvas* (webpage: my.baylor.edu). A copy of this syllabus can be downloaded from the Baylor Physics Labs webpage: www.baylor.edu/physics/tutorials

Theoretical Laboratory Experiments Supervisor: Mr. Randy Hall, BSB E312, x2208, J_Randy_Hall@baylor.edu

Office Hours: By appointment; call or send an email to arrange.

Required Texts: For PHY 1420 & PHY 1430: *Tutorials in Introductory Physics (with Homework book)* by Lillian McDermott, Peter Shaffer etc.

Note: If you are buying these textbooks for the first time, make sure that you buy a **new copy**. These books are workbooks and used versions are useless for these classes.

Safety

1. You are expected to be familiar with the entire safety section in the lab manual. Failure to follow these rules may result in your removal from the Theoretical Laboratory Experiments room and will have a negative impact on your grade.

2. **Food and beverages are not allowed in the Theoretical Laboratory Experiments room.** You must leave these things outside or keep them in your closed backpacks. This includes personal water bottles! *Students with food or beverage containers in the TE room will be asked to leave the TE room and will receive a zero for that TE. NO exceptions. This is your warning.*

3. **You must wear closed-toed shoes in lab, no sandals.** If you forget to wear closed-toed shoes then you will be required to leave the TE room, and you will receive zero for that experiment.

Theoretical Laboratory Grade:

1. Your numerical theoretical laboratory average is provided to your lecturer at the end of the course. The instructor of your physics class will determine the percentage it will count towards your final grade.
2. Your theoretical laboratory grades will be entered on *Canvas*. **Check your grades frequently to ensure that your grades have been recorded correctly.** If your grades are not posted or the grades are posted incorrectly, notify your TA or Mr. Hall.
3. **Save all your graded work until the end of the course**, then either your TA or Mr. Hall can verify the correct grade and revise the recorded grade accordingly.
4. **No Theoretical Laboratory grades will be changed after 4 pm on Friday July 5, 2019.**

Theoretical Laboratory Experiments: There are two components: 1. Theoretical lab experiments. 2. Homework assignments.

Theoretical lab experiments: During the theoretical lab experiments you will work in groups of 3 to 5 students and complete the relevant chapter of the workbook *Tutorials in Introductory Physics*. You must carefully follow all instruction given in the book. You will work *together*, while the TAs will assist you to be on the right track by engaging you in dialogue. The point of the Theoretical Laboratory Experiments is to work constructively and cooperatively in groups. Your grade for this part of the class is based on your participation. Participation means trying your best to understand the material yourself and convince others of your answers through active and patient dialogue. You will **not** be able to get the full grade if you do not participate in discussions with the others and the TA's. Your participation will be graded by your TA at the end of each Theoretical Laboratory session according to the following guideline:

Participation Level	Participation Grade
Actively participates in discussion with other members of the group and the TA's	3
Reluctantly participates and tries to understand the materials	2
Passively participates	1

You are expected to show up to your classes on time. If you are late to class by 5 minutes you lose 1 participation point, and if you are late to class by 10 minutes you lose 2 participation points. No one is admitted 15 minutes after classes start.

Homework assignments: At each theoretical lab experiment session you will be assigned two homework problems from the Homework book of the *Tutorials in Introductory Physics*. These homework assignments are due at the beginning of your next Theoretical Laboratory Experiment class. **Homework cannot be turned-in after the class has already begun.** The homework assignment will carry 3 points. Only one of your homework problems will be graded (chosen randomly). The graded homework will carry 2.5 points, while the other homework will carry 0.5 points. All parts of the other (ungraded) homework must be completed for you to be given the 0.5 points. You are strongly encouraged to work on your homework assignments in groups as you do in the TE classes. However, under no circumstances should you copy another's homework. Points will be taken off if evidence is found that you copied your homework from someone else. You are strongly encouraged to finish your homework assignments well before they are due. Past experience has shown that last minute or rushed homework assignments hardly ever get good grades.

In summary, your total grade for each theoretical lab is going to be out of 6 (3 for participation in class + 3 for homework assignments). Each of these will be posted separately on Canvas for each theoretical lab.

The Baylor University Honor Code will be strictly enforced. Details of this policy can be found on <http://www.baylor.edu/student%5Fpolicies/index.php?id=32287>

Absences:

1. **Scheduled Absences:** If you think you will be absent from a theoretical lab experiment for a *university sanctioned* event (athletic contest, band trip, debate, etc.), then email Mr. Hall at least one week before leaving for the event. It is not possible to arrange make-ups for the theoretical lab experiments. However, if you are excused from attending a particular theoretical lab experiment for a *university sanctioned* event then that grade will be dropped. Homework assignments are not excused and they are due on time. If you think you will be absent on a certain day make sure that you turn-in your homework through a friend or have it reach Mr. Hall before the due class starts. Circumstances that absolutely prevent you from giving one week's notice will be considered. This does not include club-related events.

2. **Unscheduled Absences:** If you miss a theoretical lab experiment for *any reason*, then email the Mr. Hall within **two days** after the absence. He will consider dropping the theoretical lab that you have missed *only* with the support of valid documentation (e.g. Doctor's or Counselor's note.)

3. **Attendance Requirement:** The College requires 75% attendance. Since there are 13 theoretical labs you must attend at least 10 theoretical lab sessions.

Note that missed Theoretical Lab Experiment grades will be dropped only after you present valid documentation. No Theoretical Lab Homework grades are dropped. So for example if you were suddenly taken ill you should have your homework sent by a friend and make sure that you go and see a doctor and get a document saying that you were ill on the day of the missed class. You are strongly encouraged to have your homework assignments finished well before they are due so that in case of an unforeseen unscheduled absence you don't lose your homework grade.

Lab Equipment: The equipment used in these laboratories is often expensive and difficult to replace. If you damage lab equipment, we will send you a bill. Do not put your book packs on the equipment!

Special Circumstances: If you have specific physical or learning disabilities and require special accommodations, please tell Mr. Hall early in the semester, so that your learning needs may be appropriately met. Letters from the Office of Access and Learning Accommodation should be presented to Mr. Hall, not your TA.

Free Physics Tutors: Physics tutors are available through the physics department. The tutor schedule is available through a link on the physics webpage. The tutoring area is between room E.331 and Stairway # 7 in the Baylor Science Building.

Conflicts: If you have any problem with this course, you should first discuss it with your TAs. They are there to help. You will find that they are generally willing to assist in any way that they can. In the event that you encounter a problem that you are unable to resolve with your TAs, feel free to contact Mr. Hall.

Comments and Complaints: If you have comments or complaints about your TAs or the Theoretical Labs in general please send them to Mr. Hall.