

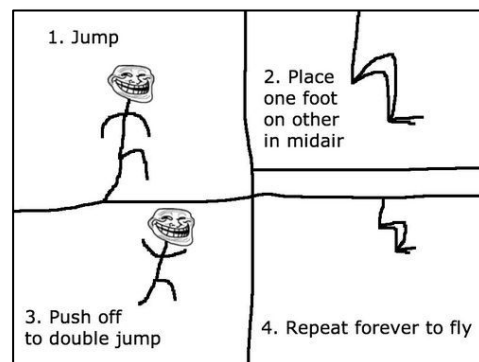
PHY 1420 and 1430 – Theory Labs

Syllabus

Please read this document carefully, since it covers just about every question students have about Theory Labs. Some items have changed from previous semesters.

The **Objectives** of the **Theory Labs** are for you to

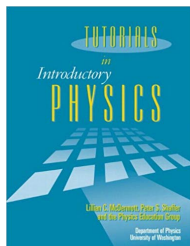
- Gain conceptual understanding of fundamental physics.
- Gain operational understanding of physical quantities.
- Be able to interpret, in simple but clear language, representation of physical quantities such as numbers, equations, and diagrams.
- Be able to solve physics problems via interactions with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



Announcements: All announcements regarding the theory labs will be sent by e-mail. The theory lab schedule, contact information for your TA's, and a copy of this syllabus can be downloaded from the Baylor Physics Theory Labs webpage: <http://www.baylor.edu/physics/theorylabs>.

Theory Lab Coordinator:

Dr. Jay R. Dittmann
BSB E.337, 254-710-2275, Jay_Dittmann@baylor.edu
Office Hours: Please send e-mail to arrange an appointment.



Required workbook: For both PHY 1420 & PHY 1430 you will need *Tutorials in Introductory Physics* by Lillian McDermott, Peter Shaffer, et al. *Tutorials in Introductory Physics* consists of two paperback books that usually come together in a bundle. The first is the workbook that you will write in during class, and it is especially important that you have a blank, unused copy. The second book contains homework problems, some of which will be used during the semester. It is not required that you have your own copy of the second book since the homework will be done on worksheets that are provided in class. However, you might find the second book helpful because it contains questions and problems that are similar to theory lab problems on exams.

Safety: There are standard safety requirements for laboratory work, and the same rules apply for both experimental labs and theory labs.

1. You are expected to be familiar with the entire safety section in the Physics 1420 or 1430 Lab Handbook. Failure to follow these rules may result in your removal from the theory lab room and will have a negative impact on your grade.

2. **Food and beverages are not allowed in the theory lab room.** You must leave these items outside or keep them in your closed backpacks. This includes personal water bottles! Students with food or beverage containers in the theory lab room will be asked to leave the room and will receive a participation score of zero for that theory lab.



3. **You must wear closed-toed shoes - no sandals.** If you forget to wear closed-toed shoes, you will be required to leave the theory lab room and you will receive a participation score of zero for that theory lab.



Theory Labs: There are two components: (1) Lab sessions, and (2) Homework assignments.

Lab sessions: During the lab sessions you will work in groups of 3 to 5 students to complete the relevant section of the workbook *Tutorials in Introductory Physics*. You must carefully follow the instructions given in the book. You will work *together*, and the TAs will assist you by engaging you in dialogue. The point of the theory lab sessions is to work constructively and cooperatively in groups to understand concepts in physics that are often complicated or confusing.

Your grade for the lab sessions 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 highest possible score if you do not participate in discussions with other students and the TA's. Your TA will grade your participation during each theory lab according to the following guidelines:

Participation Level	Participation Score
Actively participates in discussion with other members of the group and the TA's	3
Partially participates, but is distracted or not focused on the lab	2
Reluctantly participates	1

You are expected to show up to the theory lab **on time** and stay for the entire 50-minute class period. If you are late to class by 5 minutes you will lose 1 participation point, and if you are late to class by 10 minutes you will lose 2 participation points.

In rare cases, if you know in advance that you will need to miss a theory lab because of a special event associated with another class, it might be possible to make arrangements for you to attend a different lab that week only. In that case, please contact Dr. Dittmann well in advance about your situation. At the beginning of the semester, try to make sure you are registered for a theory lab section that you will be able to attend regularly, since it is not possible to change your theory lab section after the add/drop period ends.

Homework assignments: After each theory lab, you will be given a worksheet with specific homework questions and/or problems from the homework book of *Tutorials in Introductory Physics* and other sources. These homework assignments are usually due one week later. The exact due date is on the top of the homework assignment sheet. **Late homework will receive a score of 0** except under very special circumstances, and arrangements must be made with Dr. Dittmann *before the date the homework is due*.

Each homework worksheet is worth 12 homework points. Some problems (or parts of problems) will be graded for correct answers. For other problems, you will receive points for making a good attempt. The problems that are graded for correct answers and the problems that are graded for effort will be chosen at random.



You are expected to follow a few simple rules in order to simplify the sorting and processing of homework. Please be careful to follow these simple rules to avoid unnecessary penalties.

- Turn your homework in on the worksheet that is provided (typically paper of a specific color for that week). Please don't rip pages out of the *Tutorials* homework book for two reasons: often the sheets tear and become ragged or rip, and sometimes the assigned problems are not exactly the same. The penalty for turning in homework on the wrong paper is 6 homework points.
- Be sure to print your name clearly on the homework. A surprising number of homework worksheets are turned in with no name, an illegible name, or initials only. The penalty for turning in homework without a clear name is 6 homework points – if we can actually determine whose work it is!
- You must circle the day + time of your theory lab meeting time on your homework worksheet. This is important for the instructor and TAs, and it can really create problems if the day or time is incorrect. The penalty for a missing circle is 4 homework points. The penalty for an incorrect circle is 8 homework points.

You are strongly encouraged to work on your homework assignments in groups as you do in the theory labs. However, under no circumstances should you copy another's homework. **Points will be deducted if evidence is found that you copied any portion of your homework from someone else or from some other source.** Cheating will not be tolerated. You are strongly encouraged to finish your homework assignments well before they are due. If you miss a particular theory lab, you may still turn in the corresponding homework worksheet for credit. You are encouraged to ask questions of your TAs and/or professors regarding your graded homework, so that you can learn as much as possible.

Theory Lab Grade:

1. General guidelines:

- There are 10 theory labs during the semester.
- The lowest participation score and the lowest homework score are dropped.
- Participating in each theory lab is worth 3 points, for a total of 27 attendance points (after the lowest of the 10 participation scores is dropped). *(See the additional attendance requirement below.)*
- Each homework assignment is worth 12 points, for a total of 108 homework points (after the lowest of the 10 homework scores is dropped). Remember, even if you miss a particular theory lab, you may still turn in the corresponding homework assignment.
- Your overall theory lab grade will be calculated from your attendance points and homework points. Each will count 50% of your final theory lab percentage.
- If you do attend all 10 scheduled theory labs and receive 3 participation points for all of them, two extra percentage points will be added to your final theory lab percentage as a bonus.

2. At the end of the semester, your attendance record and scores for the theory labs will be provided to your physics lecture instructor. Your physics lecture instructor determines how much the theory labs will count towards your final course grade. Please see your instructor's course syllabus for more information about how your overall physics course grade is determined.

3. You will receive e-mail periodically during the semester with information about how to access a record of your Theory Lab scores. During the semester, check your scores to ensure that they have been recorded correctly. Additional information will be provided by e-mail. **Save all your graded work until the end of the semester.** This way, if there should be an error in any of your recorded scores, your TA's can verify the correct score and revise your score accordingly.

4. **No theory lab scores will be changed after 4:00 pm on Tuesday, May 7, 2019.** One or two days after this, any applicable extra credit for attendance will be added and your final theory lab percentage will be calculated.



Attendance Requirement: The College of Arts & Sciences requires 75% attendance. Since there are 10 theory labs, **you must attend at least 8 theory labs.** You may not miss more than 2 theory labs for any reason. **There are no excused or unexcused absences;** either you are present working through the lab, or you aren't. As described above, if you have an unusual conflict associated with another class, please try to arrange to attend a different Theory Lab time during the same week.

Students Needing Accommodations: Any student who needs academic accommodations related to a documented disability should inform me (not your TA) immediately at the beginning of the semester. You are required to obtain appropriate documentation and information regarding accommodations from the Office of Access and Learning Accommodation (OALA). Contact Information: (254) 710-3605 – Paul L. Foster Success Center, 1st floor on the East Wing of Sid Richardson.

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

Free Physics Tutoring: Physics tutors are available through the Physics Department. The tutoring area is between room E.331 and Stairway #7 in the Baylor Sciences Building. The tutoring schedule is available through a link on the physics webpage (<http://www.baylor.edu/physics/tutoring>), and it is also posted on the wall near the tutoring area.

Conflicts and Issues: If you have any problem with the theory labs, you should first discuss the issue with one of your TA's. 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 TA's, please contact Dr. Dittmann.

Comments: We are embarking on a useful and fascinating subject, and I hope that you enjoy the theory labs and learn a lot! If there is any way that we can make the theory labs more enjoyable and interesting, please let me know. I always appreciate hearing your comments. – Dr. Jay Dittmann.