

PHYS 1408 Principles of Physics I: Laboratory & Discussion Syllabus

Fall 2015 ◦ Texas Tech University

Section: 1408- **Section Instructor:** _____

1408 Laboratory and Discussion Coordinator(s):

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Required Materials:

Laboratory:

The lab manual is available from the *Society of Physics Students* (SC 004) and is *not* available from any bookstore. A schedule showing the hours SPS will be selling the manuals will be posted. Students must purchase their manual before the first scheduled lab exercise (i.e. by end of day 28 Aug 2015). Students without a lab manual will not be admitted to lab and the absence will be unexcused. Lab manuals *may* be available after 28 Aug 2015 at higher cost.

Discussion:

The discussion section uses the same textbook as your lecture [Serway & Jewett. Physics for Scientists and Engineers. 9th ed (Brooks/Cole, 2014)]. Students will provide their own copy of the textbook, paper, pencil, eraser and calculator.

Class Meetings:

Your laboratory and discussion sections will meet at your officially registered place and time (1408-5XX and 1408-7XX, respectively). You are only permitted to attend sections for which you are officially registered. Make-up labs are not possible. Food or drinks in any form (including chewing tobacco, gum, etc) and cell phone usage are not permitted in the lab room.

Grading:

| | <u>Laboratory</u> | | <u>Discussion</u> |
|----------------------------|-------------------|--------------------------------|-------------------|
| Submitted Laboratory Work: | 50% | Submitted Work: | 75% |
| Participation/Quizzes: | 50% | Participation: | 25% |
| <u>Total Lab Grade:</u> | <u>100%</u> | <u>Total Discussion Grade:</u> | <u>100%</u> |

Laboratory (PHYS 1408-5XX):

The laboratory portion will consist of working through the interactive laboratory exercises in the Physics 1408 Laboratory Manual including the questions and problems within each exercise.

There may be pretests and periodic quizzes on the laboratory material. Overall topics include classical mechanics (motion, forces, work, energy, momentum, periodic motion). Performance in the laboratory portion is evaluated via instructor in-class observation and lab work to be submitted at the end of each lab period. Submitted work is 50% of your overall lab grade.

Discussion (PHYS 1408-7XX):

The discussion section is designed to help with general physics concepts and problem solving. Active participation will also help you with an overall understanding of the material, homework and exams. You will work with students in your group on various concepts, activities and solving problems (e.g. homework problems) then present and discuss the work with the class or the instructor. You are required to attend and actively participate in your registered section. Performance is evaluated via the instructor in-class observation and submitted work.

Quizzes:

Quizzes may be given at the start or end of each class and may or may not be announced.

Participation:

Punctuality (i.e. in your seat and ready to begin by the scheduled start time), not leaving early, being on-task and maintaining a respectful attitude all contribute to the participation grade.

Completing physics education research or department assessments (general pre-test, post-test or other surveys) may also count toward your participation grade.

Full credit for participation is earned by making a serious effort in completing the assigned activities regardless of the *accuracy* of the particular responses. Participation points will be lost if equipment is utilized in any form that is not related to the prescribed exercise, fail to take part in group work or are otherwise not on task. Violations of the lab and general class rules may result in dismissal for the class period, reduction in participation grade, forfeiture of any submitted work left incomplete due to the dismissal and, if necessary, reported to the appropriate authorities.

Attendance:

Attendance contributes directly to the participation grade as if one is absent one is not capable of participating in a given activity. Absences will be excused for officially sanctioned university events, illness (documentation may be required), court appearances (plaintiff, defendant, witness, juror -- documentation is required), family emergencies (at the discretion of the instructor and may require appropriate documentation). If something occurs that you feel should be grounds for being excused it is your responsibility to contact your instructor, in writing, PRIOR to the absence (if possible, or as soon as possible after the absence) to discuss the situation. Excused absences for situations beyond the purview of [TTU OP 34.04](#) are at sole discretion of the instructor, will be evaluated confidentially and on a case-by-case basis.

An excused absence does NOT necessarily excuse you from completing the work. Arrangements for a planned excused absence, if possible, should be finalized (with written confirmation between the student and instructor) no later than the Friday before the week for which the absence will occur. Otherwise, establish contact with the instructor as soon as reasonably possible.

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 the activity, scheduled for that day, within a reasonable time after the absence.

Academic Integrity

[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 [...]*”.

Appropriate behavior:

Students are expected to behave in a respectful, considerate and courteous fashion in any activity related to this course. Rude, disrespectful or disruptive behavior will *never* be tolerated.

Tentative schedule of activities and whether discussion will meet (minor modifications only):

| Date | Lab Activity | Discussion |
|------------------|-----------------------------------------------------|------------|
| 24-Aug to 28-Aug | Introduction, Syllabi, etc. | Yes |
| 31-Aug to 4-Sep | One Dimensional Motion Part 1; <i>ibid</i> : Part 2 | Yes |
| 7-Sep to 11-Sep | %%No Labs: Labor Day %% | No |
| 14-Sep to 18-Sep | Vector Forces | Yes |
| 21-Sep to 25-Sep | 2-D Motion | Yes |
| 28-Sep to 2-Oct | Force, Mass and Acceleration | Yes |
| 5-Oct to 9-Oct | Work and Energy | Yes |
| 12-Oct to 16-Oct | Conservation of Linear Momentum | Yes |
| 19-Oct to 23-Oct | Rotational Dynamics | Yes |
| 26-Oct to 30-Oct | Statics and Torque | Yes |
| 2-Nov to 6-Nov | Gravitational Force | Yes |
| 9-Nov to 13-Nov | Periodic Motion | Yes |
| 16-Nov to 20-Nov | Standing Waves | Yes |
| 23-Nov to 27-Nov | %%No Labs: Thanksgiving Holiday%% | No |
| 30-Nov to 4-Dec | %%No Labs: Partial week of Class %% | No |