M.A.K. LODHI Office hours: Tu, We 10:00 - 10:50 AM.

PHYS 1403 - 506
Laboratory Syllabus

Laboratory Coordinators:

Dr. Beth Thacker
Associate Professor of Physics
Office: Science Building 15
Phone: 742-2996
Email: beth.thacker@ttu.edu

Dr. Sung-Won Lee
Assistant Professor of Physics
Office: Science Building 117
Phone: 742-3730
Email: sungwon.lee@ttu.edu

Text: Tutorials in Introductory Physics and Tutorials in Introductory Physics Homework.

Laboratory: Each laboratory period will consist of

1) a pre-test and
2) working through a tutorial with added experimental components, as needed.

There may also be quizzes or post-tests, as needed.

You will work through the materials in a group of three or four students, talking to each other, answering the questions in the tutorial and experimenting. Make sure each person in your group understands. A teaching assistant will circulate around the room to help you when needed.

The teaching assistant will check that you have completed the laboratory work each week, as you leave the lab. You will turn in the work you did in the laboratory with your laboratory homework each week for grading. Your laboratory work will count as 20% of your grade.

Laboratory homework: Each week, you will have a tutorial homework based on the work you did in the laboratory. It will be due at the beginning of class the next week. After the beginning of class it is late and will not be accepted. Tutorial homework will be 25% of your laboratory grade.

Pre-tests and laboratory work: You will get credit for coming to lab, being on time and being on task (doing what you are supposed to be doing when you are supposed to be doing it). The pre-tests and laboratory participation will count as 15% of your grade. You will have a pre-test at the beginning of each laboratory. Pre-tests are not graded, but you are required to do a pretest at the beginning of each laboratory. Pre-tests are to determine your understanding of the content of the laboratory before you start. Pre-tests will be collected. You will get credit for doing the pre-tests, if you do each pre-test and take it seriously. Pre-tests and laboratory participation will count as 15% of your grade. One-half of a percentage point will be deducted for each pre-test you do not complete or take seriously. One-half of a percentage point will be deducted for each lab you do not attend. One-half of a percentage point will be deducted if you are not on task and participating in lab. Notice that this part of the grade can go negative.

Quizzes or post-tests: There will be quizzes given in the lecture part of the course that will count as part of your laboratory grade. These will be graded. Quizzes and/or post-tests will count as 40% of your laboratory grade.

A tentative schedule is the list of the tutorials in the tutorial book in the order that they occur, as below, but there may be changes, particularly near the end of the course:

Laboratory 1: Introduction and Velocity
Laboratory 2: Representations of Motion
Laboratory 3: Acceleration in one dimension
Laboratory 4: Motion in two dimensions
Laboratory 5: Forces
Laboratory 6: Newton's second and third laws
Laboratory 7: Tension
Laboratory 8: Work and changes in kinetic energy
Laboratory 9: Changes in energy and momentum
Laboratory 10: Conservation of Momentum
Laboratory 11: Two-dimensional collisions
Laboratory 12: Rotational motion
Laboratory 13: Dynamics of rigid bodies

Grading:

Laboratory work	20%
Laboratory homework	25%
Quizzes or post-tests	40%
Pre-tests and participation	15%

Any student who because of a disability may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make any necessary accommodations. Student should present appropriate verification from AccessTECH. No requirement exists that accommodations be made prior to completion of this approved university procedure.