

SMU Summer 2009
Physics 1105 : Mechanics Laboratory
Syllabus

Instructor : Will McElgin

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Email : mcelgin@physics.smu.edu

Office Hours : MWF – 12-2pm (also open door policy)

TA : Yichen Li

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Text : Taylor, “Error Analysis”

Course Website : www.physics.smu.edu/mcelgin/P1105_summer2009/P1105.html

Lecture Times : MWF – 2:00pm-4:50pm

Lecture Location : Fondren 32

Description of the Course

This laboratory is intended to demonstrate physical phenomena, and to introduce students to laboratory and statistical techniques, as a companion to a calculus-based lecture course in classical mechanics.

Evaluation

The grade in this laboratory will be based entirely on the evaluation of the laboratory notebooks (70%) and the pre-laboratory assignments (30%). Pre-laboratory assignments, which appear along with the laboratory procedures on the course website, will be collected at the start of the laboratory.

Schedule

- 6/3 : Lab 1 : Error Analysis
- 6/5 : Lab 2 : Measurement Error
- 6/8 : Lab 3 : Kinematics
- 6/10 : Lab 4 : Acceleration and Freefall
- 6/12 : Lab 5 : Newton's First and Third Laws
- 6/15 : Lab 6 : Forces in Equilibrium
- 6/17 : Lab 7 : Newton's Second Law and Friction
- 6/19 : Lab 8 : Linear Momentum and Collisions
- 6/22 : Lab 9 : Uniform Circular Motion
- 6/24 : Lab 10 : Simple Harmonic Motion
- 6/26 : Lab 11 : Standing Waves
- 6/29 : Lab 12 : Archimedes' Principle and Bouyancy