

CATALOG INFORMATION

Dept and Nbr: PHYS 10L Title: INTRO PHYSICS LAB
Full Title: Introduction to Physics Lab
Last Reviewed: 2/8/2010

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 1.00 | Lecture Scheduled | 0 | 17.5 | Lecture Scheduled | 0 |
| Minimum | 1.00 | Lab Scheduled | 3.00 | 17.5 | Lab Scheduled | 52.50 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 3.00 | | Contact Total | 52.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 0.00

Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable
Grading: Grade or P/NP
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
Experimental laboratory to accompany Physics 10.

Prerequisites/Corequisites:
Phys 10 completed or in progress.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Lab experiments to accompany Physics 10. (Grade or P/NP)
Prerequisites/Corequisites: Phys 10 completed or in progress.
Recommended:
Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | | |
|----------------------|----------------------|--------------------------|------------|-----------|
| AS Degree: | Area | | Effective: | Inactive: |
| CSU GE: | Transfer Area | | Effective: | Inactive: |
| | B3 | Laboratory Activity | Fall 2012 | Fall 2015 |
| | B3 | Laboratory Activity | Fall 1981 | Fall 2012 |
| IGETC: | Transfer Area | | Effective: | Inactive: |
| | 5C | Fulfills Lab Requirement | Fall 2012 | Fall 2015 |
| | 5C | Fulfills Lab Requirement | Fall 1981 | Fall 2012 |
| CSU Transfer: | Transferable | Effective: | Fall 1981 | Inactive: |
| | | | | Fall 2015 |
| UC Transfer: | Transferable | Effective: | Fall 1981 | Inactive: |
| | | | | Fall 2015 |

CID:

Certificate/Major Applicable:

Major Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Upon completion of this course, the student should be able to:

1. Make measurements using a variety of measuring devices.
2. Construct a graph displaying experimental data using a computer graphing program, determine the slope of a line, read coordinate points from a graph, and describe what a graph indicates about the plotted variables.
3. Set up and perform physics experiments following written or verbal instructions.
4. Calculate quantities involving experimental data using calculators and/or spreadsheet calculations.
5. Interpret/discuss the meaning/significance of experimental results.
6. Record a prediction of what will occur in doing an experiment, an observation of what happens, and a discussion of how the observation confirms or fails to confirm the prediction.

Topics and Scope:

1. Relationships between Units
2. Introduction to Motion
3. Acceleration due to Gravity
4. Uniformly Accelerated Motion
5. An Experiment with Baseballs and Bicycles
6. Momentum
7. Waves
8. Sound Waves
9. Electrostatic Charge
10. Light Bulbs in Electrical Circuits
11. Electrical Energy
12. Images from Lenses
13. Light Patterns from Pin Holes
14. The Prism Spectrometer

15. Radioactive Decay Analog

Assignment:

1. No less than 12 laboratory experiments.
2. No more than 1 mid-term exam.
3. Final exam.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Lab reports

Problem solving
70 - 80%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, Completion, PHYSICS PROBLEMS TO SOLVE

Exams
20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

Physics 10L Lab Manual by Sally Heath.