CHAMINADE UNIVERSITY
PHY-251L: UNIVERSITY PHYSICS I LABORATORY
COURSE SYLLABUS – FALL 2010

Instructor: Matthew Cochran
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Office: Henry Hall 7
Office Phone: 739-8361
Office Hours: Monday through Thursday 12:00 to 1:00 or by appointment
Course Time: Wednesday or Friday from 2:00 to 4:50
Course Room: Henry Hall L10
Prerequisites: Concurrent enrollment in PHY-251 is assumed.
Required Text: None. Handouts will be provided.
Other Materials: Scientific Calculator

COURSE DESCRIPTION:

This is an introduction to laboratory techniques and experiments that illustrate and apply basic physics principles presented in lecture. Students will have the opportunity to apply the scientific method in collecting and analyzing data.

COURSE OBJECTIVES:

Upon successful completion of the course, students will be able to:

- Make careful measurements of physical quantities such as distance, time, force, and velocity using various scientific instruments.
- Estimate the uncertainties and demonstrate a knowledge of statistical analysis.
- Present results graphically and make calculations using a computer when appropriate.
- Prepare technical material in writing.

EVALUATIONS AND GRADING SCALE:

Worksheet Labs Reports (12) 60%
Formal Lab Reports (2) 30%
Final 10%

90% – 100% . . . . . A
80% – 90% . . . . . B
70% – 80% C
60% – 70% . . . . . D
0% – 60% . . . . . F

Incomplete grades (I) will be given in accordance with college regulations as outlined in the college catalog. Withdrawals (W) from the class are the responsibility of the student and deadlines are set by the college.

LAB REPORTS:
There are fourteen labs during the semester. Twelve of them will be in the form of worksheets. These labs should be competed in class and turned-in before leaving. Two of the labs will be prepared in more detail. These formal lab reports are essentially scaled-down versions of a scientific paper, reporting on the results of an experiment that you and your lab partner have carried out. Key sections of the report will include: abstract, introduction, procedure, results, and conclusions.

Although students will work in groups on experiments, lab assignments are individual preparations. Each student is responsible for their own interpretation of results.

ATTENDANCE:
Each students is expected to attend every lab. Arrive on time. Makeup labs will only be given under extenuating circumstances beyond the student's control. If a student knows in advance of an absence, inform the instructor as soon as possible.

SAFETY:
No food or drinks are allowed in lab. In addition, student must wear closed-toed shoes at all times. Slippers are not allowed.

TENTATIVE SCHEDULE:

Week	Wednesday	Friday	Lab
1	Aug 25	Aug 27	Lab 1: Units and Significant Figures
2	Sep 01	Sep 03	Lab 2: Acceleration of Gravity
3	Sep 08	Sep 10	Lab 3: Motion of a Ball
4	Sep 15	Sep 17	Lab 4: Projectile Motion I
5	Sep 22	Sep 24	Lab 5: Projectile Motion II
6	Sep 29	Oct 01	Lab 6: Friction (formal)
7	Oct 06	Oct 08	Lab 7: Cart Dynamics
8	Oct 13	Oct 15	Lab 8: Collisions
9	Oct 20	Oct 22	Lab 9: Impulse and Momentum
10	Oct 27	Oct 29	Lab 10: Statics
11	Nov 03	Nov 05	Lab 11: Hooke's Law
12	Nov 10	Nov 12	Lab 12: Simple Harmonic Motion (formal)
13	Nov 17	Nov 19	Lab 13: Buoyancy
14	Nov 24	Nov 26	Thanksgiving
15	Dec 01	Dec 03	Lab 14: Specific Heat