

<p>CHAMINADE UNIVERSITY PHY-130LL: PHYSICS OF HUMAN MOTION LABORATORY COURSE SYLLABUS – FALL 2011</p>

Instructor: Eric Dodson
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Office Hours: TBA
Course Time: Thu. 11:30-1:500 PM
Course Room: Henry Hall L10
Prerequisites: Concurrent enrollment in PHY-131 is assumed.
Required Text: None. Handouts will be provided.
Other Materials: Scientific Calculator and Lab Coat

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. Students will investigate fundamental principles of physics and their application to human motion.

COURSE OBJECTIVES:

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

- Make careful measurements of physical quantities.
- Apply principles of physics in the analysis of human motion.
- Present results graphically and make calculations using a computer when appropriate.

EVALUATIONS AND GRADING SCALE:

Worksheet Lab Reports 60%

Quizzes 20%

Project 20%

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 eleven labs during the semester. They will be in the form of worksheets and should be completed in class and turned in at the beginning of the next class

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

QUIZZES: We will have a short quiz at the beginning of each lab (5-10 minutes). The quiz will be based on your understanding of the previous weeks lab. You may use your lab report (worksheet) while taking the quiz. No make-up quizzes will be given. At the end of the semester I will drop your two lowest quiz scores.

PROJECT: Students will present the findings of their group projects during the last two weeks of lab. The instructor will discuss project requirements during class

ATTENDANCE:

Each student 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 lab coats and closed-toed shoes at all times. Slippers are not allowed.

TENTATIVE SCHEDULE:

Week	Lab
1	Intro, General Education Survey
2	Units (mks) and Measurement
3	Position, Velocity and Acceleration
4	Running Speed: Stride length and frequency
5	Projectile Motion
6	Force Plate I (Squats and Pushups)
7	Force Plate II (Vertical Jump)
8	Energy I
9	Energy II
10	Torque
11	Center of Mass
12	Specific Heat
13	Project Presentations
14	Thanksgiving
15	Project Presentations