

Physics 31A - General Physics

1. Course Description:

General Physics – Classical Mechanics and Thermal Physics

Lecture 3 hours, Lab & Discussion 4 hours

Meets Physics prerequisites for:

- 1) Pre-med at UCLA, UCSD, UCI, CSUSB, and CSUN
- 2) Architecture at Cal Poly Pomona
- 3) Civil Engineering at CSULA, CSUN, and Cal Poly Pomona
- 4) Electrical Engineering at CSULA, CSUN, and Cal Poly Pomona
- 5) Please check each individual University Catalog for sure

2. Prerequisites:

Minimum grades of C in Math 5A

3. Instructor:

Dr. Wai Min Liu

Voicemail # (626) 585-7150

Email

WLiu@controptics.com

Office

E310E

4. Text:

Eugene Hecht, Physics: Calculus (2nd Edition) (Volume I)

5. Objective:

- Understanding concepts and theorems
- Acquiring independent studying and problem solving skills

6. Grading:

Lab	200 pts
Two Tests	200 pts
Midterm	200 pts
Homework	100 pts (each chapter HW 6 pts)
Final	300 pts
Total	1000 pts

7. Class Rules:

- No make up test or exam
- Each lecture absence deducts 20 points
- Each lab absence deducts 20 points
- Each tardy or early departure deducts 10 points
- Each talking or disturbing during lecture deducts 20 points

Physics

31A Lab

WEEK	Exp#	Lab	Chapter
1	1	Introduction of Lab Report / Graphs & Motion	1, 20, 21, 22
2	2	Free Fall	3
3	3	Projectiles	4
4	4	Newton's First Law	2
5	5	$F = m * a$	5
6	6	Centrifugal Force / $T = I\alpha$	8, 10
7	7	Rolling Motion	9
8	8	Conservation of Angular Momentum	11
9	9	Hook's Law / Simple Harmonic Motion	12, 13
10	10	Archimedes Priciple	
11	11	Charles Law	
12	12	Calories / Heat Conduction	16
13	13	Speed of Sound / Doppler Effect	19