

PHYSICS 2A (section id: 722334)
Mechanics
FALL 2011

Instructor: Kim Griest

Lecture: MWF 2:00pm -2:50pm, York 2722
Discussion/Problems Monday 8-8:50pm, Center Hall 101

Weekly Quizzes: Tues 7:00-7:50pm, York 2722, starting Oct 4
(Require scantron form No. X101864-PAR (they can be green or red)
No make-up quizzes, but your two worst scores will be dropped;
(IF YOU ARE GOING TO MISS 3 OR MORE QUIZZES, DO NOT TAKE THIS COURSE.)

Griest Office: 337 SERF, 858-534-8914
Griest Office Hours: Monday: 3:15-4:15pm (337 SERF) or call for appointment

T.A.: James Tian, j2tian@ucsd.edu
T.A. Office hours: Tuesday 2-3pm, physics tutorial center, Mayer Hall
[http://physics.ucsd.edu/students/courses/tutorialcenter/
location.html](http://physics.ucsd.edu/students/courses/tutorialcenter/location.html)

Web Page: <http://physics.ucsd.edu/students/courses/fall2011/physics2a>
Text: Wolfson and Pasachoff, Volume I, UCSD Custom Edition,
Physics for Scientists and Engineers, 3rd edition

Final: Wed, Dec 7, 3 - 6 pm, York 2722
[NOTE: NO LATE OR EARLY FINAL; CHECK YOUR SCHEDULE NOW!]

GRADING POLICY

Quizzes: 60%
Final: 40%

Homework will be assigned weekly, but will not be collected or graded.
The solutions to odd numbered problems are in the textbook supplement;
answers to even numbers will be posted.

Note that the quizzes and final will closely resemble the homework
problems (and the examples in the book). If you can do all the homework
on your own you will get a good grade in this course.
If you skip doing homework, you will probably get a poor grade.
Physics is only learned by the pain of doing the problems on your own.
You cannot memorize things at the end or just read over examples and expect to do
well.

ACADEMIC DISHONESTY

You must do all the work on the quizzes and the final yourself and
may not help anyone else. Any copying
or cheating of any kind will be met with severe consequences.

This includes helping someone else cheat.
If you are thinking of cheating, don't take this class from me!

OUTLINE OF TOPICS

We'll cover pretty much everything in our custom book. While the book is short, there are many difficult topics that will require all your math skills and substantial insight. This course is the most basic in establishing your understanding of how the physical world works. The concepts of mass, force, acceleration, energy, power, torque, momentum, etc. are the foundation on which all engineering is based. If you spend the time to really learn these concepts this quarter, it will make the rest of your study of science and engineering easier. There is no concept we learn this quarter that is not useful in many many other areas of science and engineering.

- Chap 1: Doing Physics
- Chap 2: Kinematics: moving in a straight line
- Chap 3: Vector description of motion
- Chap 4: Motion in several dimensions
- Chap 5: Force and movement
- Chap 6: Newton's laws
- Chap 7: Work, Energy, Power
- Chap 8: Conservation of Energy
- Chap 9: Motion under influence of Gravity
- Chap 10: Systems of particles
- Chap 11: Collisions and linear momentum
- Chap 12: Rotation
- Chap 13: Angular Momentum
- Chap 14: Static equilibrium: buildings and bridges
- Chap 15: Oscillations