PHYS 186
College Physics II
Truman State University - Spring 2000

Meetings:
Lecture: Barnett Hall 251, MWF 2:30-3:20pm
Lab #1: Barnett 150, M 8:30-10:20am
Lab #2: Barnett 150, Th 10:30a-12:20p
Lab #3: Barnett 150, F 8:30-10:20am

Instructor: Rob Salgado
office: Barnett Hall 263
voice: (660)-785-4072
email: `rsalgado@truman.edu`
WWW: `http://www2.truman.edu/~rsalgado/`

Office hours: MF 10:30-11:20, W 3:30-4:20, Th 12:30-1:20, 2:30-3:20
or DROP BY MY OFFICE or MAKE AN APPOINTMENT.

Catalog Description: Maxwell's synthesis of electricity and magnetism in the mid-nineteenth century led to unexpected knowledge about the nature of light. It opened the door to a whole new world view developed by twentieth century physicists and paved the way for the technological revolution that characterizes modern life. Students will make extensive use of algebra and trigonometry in applying the fundamental laws of classical physics to real-world problems, and will explore the physicist's approach to inquiry through laboratory investigations. [Prerequisite: PHYS 185]

Textbook: Cutnell and Johnson. *Physics: 4th edition.*
If you are not completely happy with the textbook, find another one from the library! (I did this for every class I took!)

Electronic Materials: I will maintain a webpage that lists the assigned problems and, possibly, solutions. Please refer to:
`http://www2.truman.edu/~rsalgado/186/`

Labs: Labs will make up 20% of your course grade. Details will be described in another handout.

Homework: Homework will not be collected. However, I guarantee that at least one of those problems will appear on a quiz or exam. You are encouraged to work together on the homework. However, be sure that you can do the problems by yourself since you'll be working by yourself on a quiz or exam.

Quizzes: Quizzes will be given at the end of each chapter. They will be announced in advance. Each quiz will be given at the end of class-period and will last 20 minutes.

Exams: There are THREE one-50-minute exams and ONE two-hour fourth-exam. Each exam will be based on a range of chapters covered in the course. It may include questions relating to an activity you did in lab. The fourth exam will cover the last three chapters as well as a "cumulative" part covering all of the other chapters. If you think that you will have a conflict with a scheduled exam, contact me in advance of the exam.

Grades:

- 20% Lab (details will appear in another handout)
- 15% Quizzes
- 45% 50-min Exams (3 × 15%)
- 20% Final exam

A=87+, B=77+, C=67+, D=57+, F<57.
This class is not graded on a curve.
If your exams show an upward trend, you'll be nudged upwards.
If you are an active participant in class, you'll be nudged upwards.

(The Lab schedule will appear on another handout.)

- week of 01/10: Chapter 16: Waves and sound
- week of 01/17: (more 16)
- week of 01/24: (more 16)
- week of 01/31: Chapter 18: Electric forces and electric fields
- week of 02/07: (more 18)
- week of 02/14: Chapter 19: Electric potential energy and the electric potential
- —EXAM MONDAY Feb 21
- week of 02/21: Chapter 20: Electric circuits (R, C)
- week of 02/28 (more 20)
- week of 03/06: - BREAK -
- week of 03/13 Chapter 21: Magnetic forces and magnetic fields
- week of 03/20 (more 21)
- —EXAM MONDAY Mar 27
- week of 03/27 Chapter 22: Electromagnetic induction
- week of 04/03 Chapter 24: Electromagnetic waves
- week of 04/10 Chapter 26: The refraction of light: lenses and optical instruments
- —EXAM MONDAY Apr 17
- week of 04/17 Chapter 28: Special relativity
- week of 04/24 Chapter 31: Nuclear physics and radioactivity
- week of 05/01 Chapter 32: Ionizing radiation, nuclear energy, and elementary particles
- —FOURTH EXAM: Monday, May 8 1:30-3:20pm