Specifications:
Instructor: Dr. Eric Abraham
Office: Room 125 Nielsen Hall
Lab: Room B31 Nielsen Hall (basement)
Office Phone: 325-3961 x36125
Lab Phone: 325-3961 x36531
e-mail: abe@mail.nhn.ou.edu
Class Day: Monday, Wednesday, Thursday, and Friday
Class Time: 9:30-10:20
Class Place: Room 209, Nielsen Hall
Office Hours: TBA

Pre- and Co-Requisites:
It is assumed the students have at least: a mastery of algebra and trigonometry, and learning differential calculus concurrently. Much of the material is mathematically based, thus mathematical mastery is a must. If you have any concerns about this, come talk to me.

Text:
Physics by Paul A. Tipler. This book will become a dear friend. Not only will it teach you things now, but it will stay with you for the rest of your career as a source of information to which you will return again and again. We will cover as much as possible of Chapters 1-17 in the text: kinematics, forces, energy, momentum, fluids, oscillations, and waves. I have also required a companion text, Mathematical Handbook of Formulas and Tables by Spiegel and Liu. This handbook is simply a crucial collection of important mathematical formulas, and could very well be the most frequently used book of your physics education.

Grading:

Homework: 25%
Quizzes: 15%
Lab Grade: 10%*  *see the next section.
First Exam: 10%
Second Exam: 10%
Third Exam: 10%
Final Exam 20%

The grading will be done on a straight scale (87.5% = A, 75% = B, 62.5% = C, 50% = D), thus grades will not be curved. This is done so there is no disadvantage in working together. You are encouraged to work together on this stuff, and if everyone does well, everyone gets A’s!
**Details:**

Homework will be assigned weekly, usually covering one chapter of the text. There will be approximately 15 homework sets, and it is the most important component of the class, constituting 25% of the final grade. There will be a substantial amount of extra credit homework, so do not panic about bad homework grades. Students are strongly encouraged to work together on homework, but it must be stressed that simply copying the solutions, from anywhere, is cheating. To receive honors credit for the class, 50% of a selection of the extra credit homework must be completed. There will be approximately 10 quizzes, usually covering one chapter of the text, and you will be able to drop your lowest quiz score. While the lab grade is 10% of the final grade, participation is required. Missing one lab will result in a full grade demotion in the final grade. Missing two labs will result in a failing grade. You responsible for everything covered in class: physics, announcements, changes, new homework problems, etc. Sometimes, crucial information is given only verbally in class. We have a tremendous amount of interesting and important material to cover. It requires a large amount of persistence and self-discipline to navigate successfully. Because of this, there is essentially no flexibility in any deadlines. No assignment will be accepted after the stated deadline. You will have to trust me that this work is a lot easier to do on time than not. There will be no makeup quizzes. There will be no makeup exams unless a dire emergency exists, of which evidence may have to be provided and I must be consulted. A single, comprehensive exam will be given at the end of the semester, which will count as a makeup exam for those emergency deferments.

**Typical Weekly Schedule:**

- Wednesday: Homework due.
  
  - Quiz covering previous material (20-30 min).
  - Introduction to new material.
  - Assignment of new homework.

- Thursday: Lecture on new material.

- Friday: Lecture on new material.

- Monday: Wrap-up / review / questions on material and homework.

**Summary:**

Since the goal of this course is to enjoyably learn physics and not to simply adhere to a rigid set of rules, nothing is absolutely written in stone. I may ask questions for feedback to increase the effectiveness of the course. Of course, you can always come to me if you have a question or concern about how the class is going. I swear that I take constructive (not so much destructive, but sometimes deconstructive) criticism well. Please, please, if the class is not progressing as you would like or you are not doing as well as you expect, do not drop the class without consulting me. Nearly invariably, people over-estimate how badly they are doing and under-estimate how much they can turn their grade around.

For the remainder of this semester, this class and my office are embarrassment-free zones. Never, never, fear asking questions about things you do not understand about the math or the physics. Little about this material is trivial. **If you do not understand something, odds are I did not explain it well enough.** I look forward to getting to know everyone, and I am open to any questions and problems you may have.