

PHYSICS 100B (Fall 2008)
(Section 14836 M, W, F 9:00 AM – 9:50 AM)

Course Details until 10/01/08

INSTRUCTOR: Luke Haley until 10/01/08 – Dr. Henk Postma will return on 10/01/08

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OFFICE: EH 2105

OFFICE HOURS: T, Th 9:15 AM – 10:00 AM **AND BY APPOINTMENT**

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TEXTBOOK –Physics, Walker, 3rd Ed. (With Mastering Physics)

HOMEWORK WEBSITE: <http://www.masteringphysics.com>

Course ID: POSTMAFALL100B900, School Zip Code: 91330

COURSE DESCRIPTION:

This course is an algebra based introductory course covering the concepts of electricity, magnetism, optics, and modern physics.

COURSE OBJECTIVES:

To gain basic knowledge and understand the main principles of physics. The student should develop strong problem solving skills.

GE SLOs:

This course satisfies the following GE Student Learning Objectives (SLOs):

SLO 1: Demonstrate an understanding of basic knowledge, principles, and laws in the natural sciences.

SLO 4: Recognize the contribution and potential of science in human society and everyday life.

SLO 5: Demonstrate competence in applying the methods of scientific inquiry.

The course SLOs will be met via a combination of activities. Lectures will cover the course topics including a description of the physical principles and background, examples which show relevance of the material to phenomena encountered in nature and actual situations, demonstrations which show practical and experimental applications, and guidance on problem solving techniques and their implementation.

Class discussion will clarify difficult points, enhance learning, and provide a two-way feedback. Homework, in class quizzes, and exams will permit the students demonstrate their comprehension of the material and problem solving skills.

GRADING:

Lecture Exams

There will be two lecture exams and a final lecture exam. Each lecture exam will be worth 25% of the final grade. The final exam will be cumulative and worth 45% of the final grade. All exams must be taken on the assigned days.

ALL students are responsible for taking **all** exams. There are **no makeup exams**. Make note of the tentative exam schedule below. If you have a religious holiday or other conflict, let me know during the first week.

You will be allowed to create your own formula sheet for each exam. The sheet can be one side of one page of an 8.5"x11" sheet of paper. You may write any equations, figures or text, but it must be handwritten. No copies or prints allowed. Improper formula sheets may be taken away during the exam or considered cheating.

Homework

Homework will be assigned online at website <http://www.masteringphysics.com>. You must set up an account to the class ID listed above using the access code provided by your book or purchased from the website. The homework is integral for understanding the problems on the exams. Students having difficulty with the homework problems should contact the instructor during office hours and/or email. Homework will be worth 05% of the final grade.

Final Grade

The final grade will be calculated using the following:

$0.25 * E1 + 0.25 * E2 + 0.45 * FE + 0.05 * HW = FG\%$, where E1 and E2 are the two exam grade percentages, FE is the final exam grade percentage, HW is the homework grade percentage, and FG is the final grade percentage.

The grade distribution will be adjusted based on the performance of the class (+/- grading is used).

IMPORTANT DATES:

Refer to the schedule of classes for important dates. The last day to drop is 9/12/08.

CHEATING:

Cheating will not be tolerated. Adhere to the following procedures during exams:

1. Keep your eyes on your exam at all times
2. Keep your answers covered at all times
3. Do not communicate with any other student during the exam
4. Do not use any unauthorized prepared material during the exam
5. Turn off all cell phones (do not put on vibrate or silent). Simply looking at a phone may be considered cheating.

Furthermore, no student will be allowed to leave the classroom during an examination for any reason, including the use of the restroom. Take care of your restroom needs before the exam.

KEYS TO SUCCESS:

Physics is a difficult subject and therefore requires considerable time outside of class. To ensure proper understanding of the subject, you must overcome obstacles. These include understanding mathematics, learning and applying problem solving methods and techniques, learning difficult concepts, and time management.

Understanding mathematics

Mathematics is the language of physics. To be successful in this course, you must have a good understanding of mathematics, including algebra and trigonometry. Be sure to review these topics. It is not enough to simply have credit for these courses, but you will be expected to know how to use these tools to solve problems. If you have trouble, contact the instructor during office hours, by email, or through the class message boards.

Learning and Applying Problem Solving Methods and Techniques

This course will test your knowledge of physics by evaluating your ability to solve problems. It is important to practice, practice, and practice, to develop good problem solving skills. This includes doing homework in a timely manner, working out examples and problems done in class, and attempting other problems. If you have trouble, be sure to ask questions during office hours, by email, or through the class message boards.

Learning Difficult Concepts

In addition to developing problem solving skills, students must develop a strong conceptual understanding. A good conceptual understanding of the basic physical principles will help the student solve problems that are slightly different than assigned problems and relate ideas learned in class to the outside world.

Time Management

This may be one of the most important skills to develop early in a student's college career. For an average class, an average student should allocate something like 3 hours outside of class for each hour spent inside class. This would equate to about 9 hours per week outside of class time studying for this lecture alone. This course is generally more difficult than an average course and will likely require more like 5 hours outside of class for each hour spent inside class. Thus, for this lecture alone, you should try to plan on spending nearly 15 hours per week outside of class time studying for this class. Be sure to spread out your time as well. It is much better to allocate a few hours each night and bulk on the weekends instead of spending all of your study time on the weekends. This can easily be accomplished by allocating at least four hours per day on the weekdays and nine hours per day on the weekends. **DO NOT FALL BEHIND** as this will be the beginnings of failure.

If you overcome these obstacles, you will ensure your success in this course. This course is a building block for the success of other advanced courses and entrance exams. Having a strong understanding of the material presented in this course will make it easier to achieve success in future courses.

TENTATIVE LECTURE SCHEDULE

<u>WEEK OF</u>	<u>TOPIC</u>
8/25	Introduction, Review, 19.1 – 19.3
	9/1 – HOLIDAY (Labor Day)
9/1	19.4 – 19.7
9/8	20.1 – 20.6
9/15	21.1 – 21.5
9/22	21.6 – 21.7
	09/26 Exam 1 (Ch 19, 20, 21)
9/29	22.1 – 22.4
THE DATES BELOW ARE SUBJECT TO CHANGE	
10/6	22.5 – 22.7, 23.1 – 23.1
10/13	23.3 – 23.6, 23.10
10/20	24.1, 25.1 – 25.5
	Exam 2 (Ch 22, 23, 24, 25) – Date TBA (around 10/29)
10/27	26.1 – 26.2
11/3	26.3 – 26.7
11/10	28.1 – 28.5, 29.1 – 29.2
11/17	29.3 – 29.6, 30.1 – 30.2
11/24	30.3 – 30.6
	11/28 – HOLIDAY (Thanksgiving)
12/1	31.1 – 31.4
12/8	31.5
	12/15 Comprehensive Final Exam 8:00 AM – 10:00 AM